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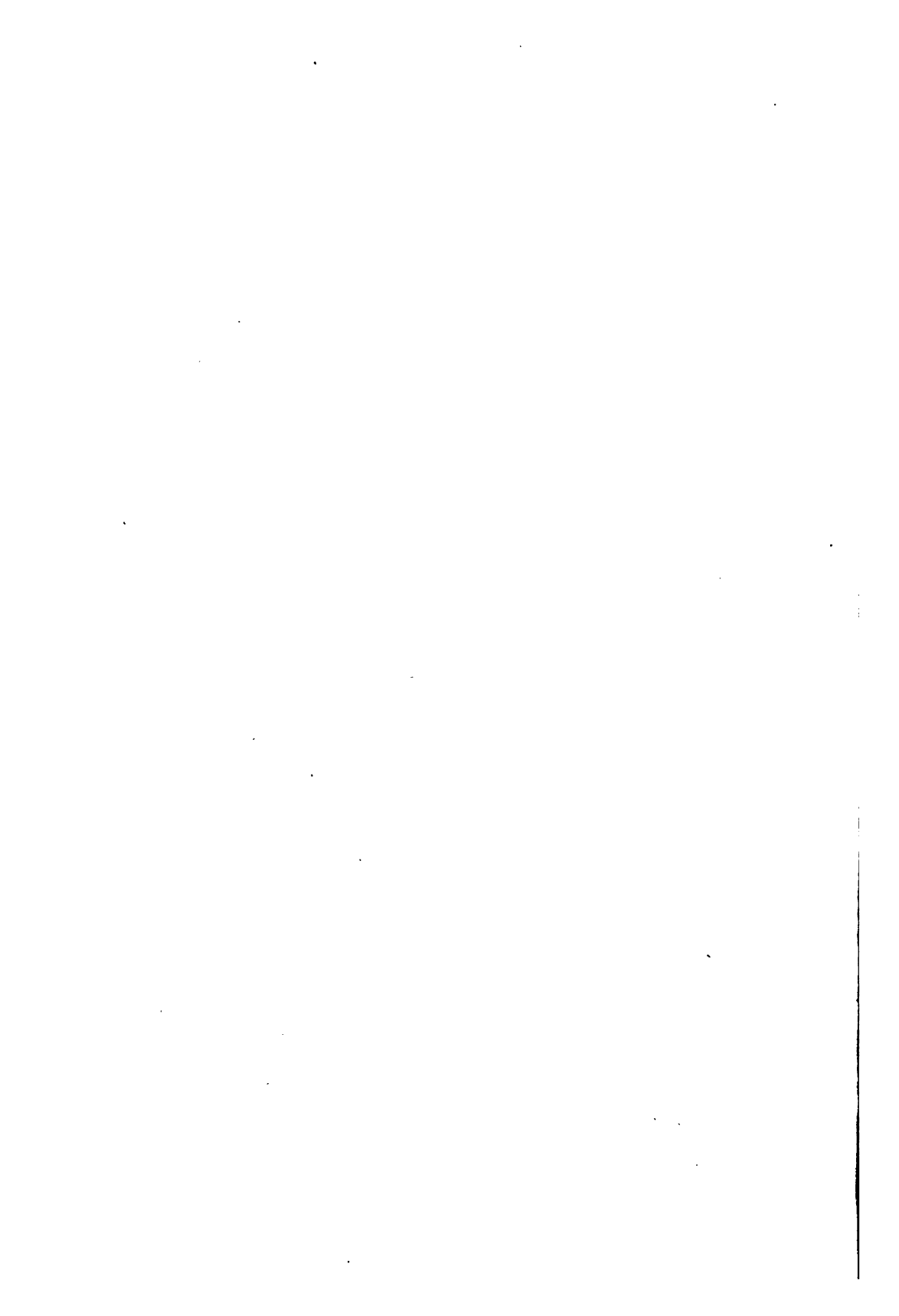
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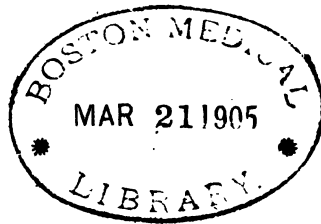
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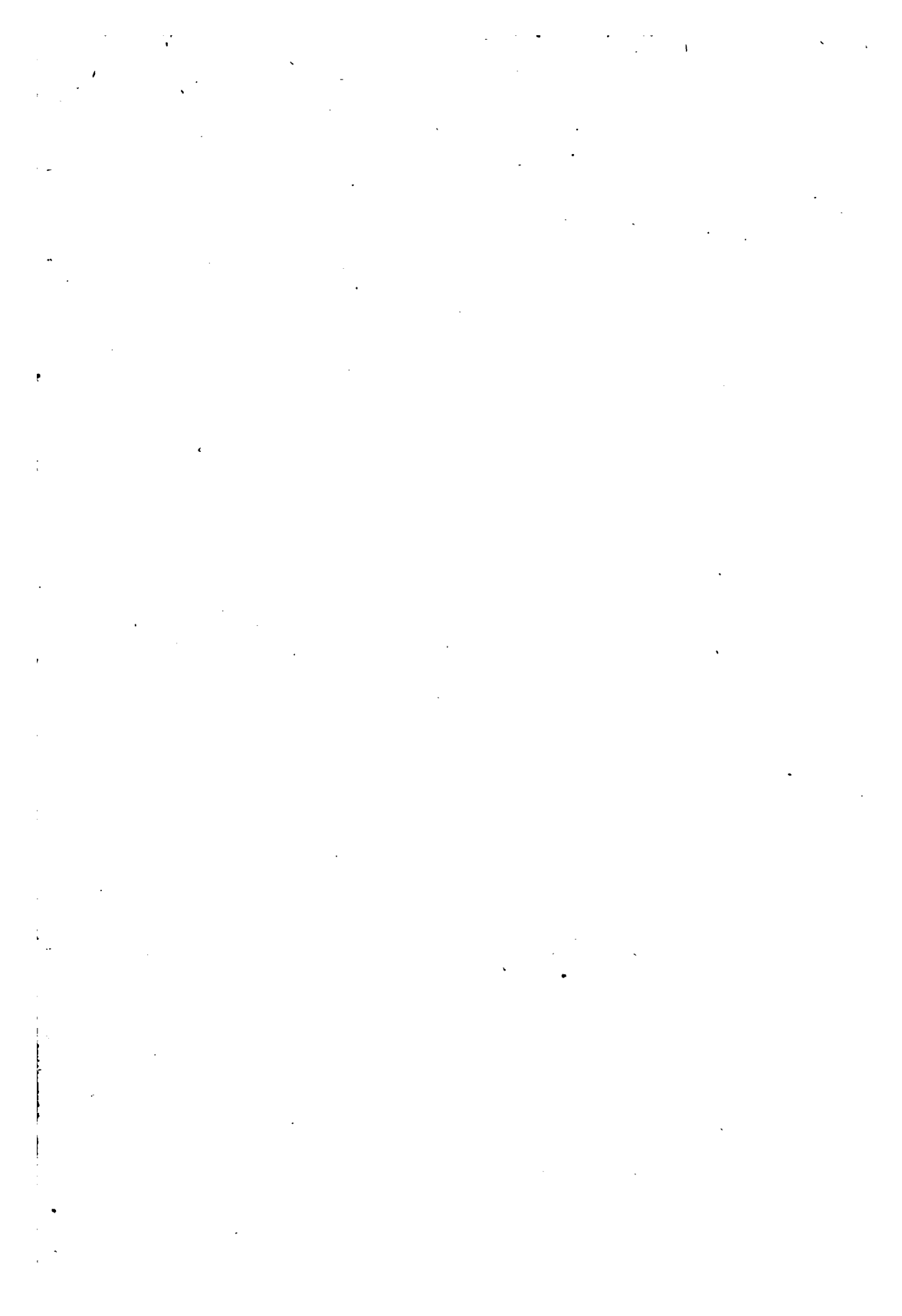
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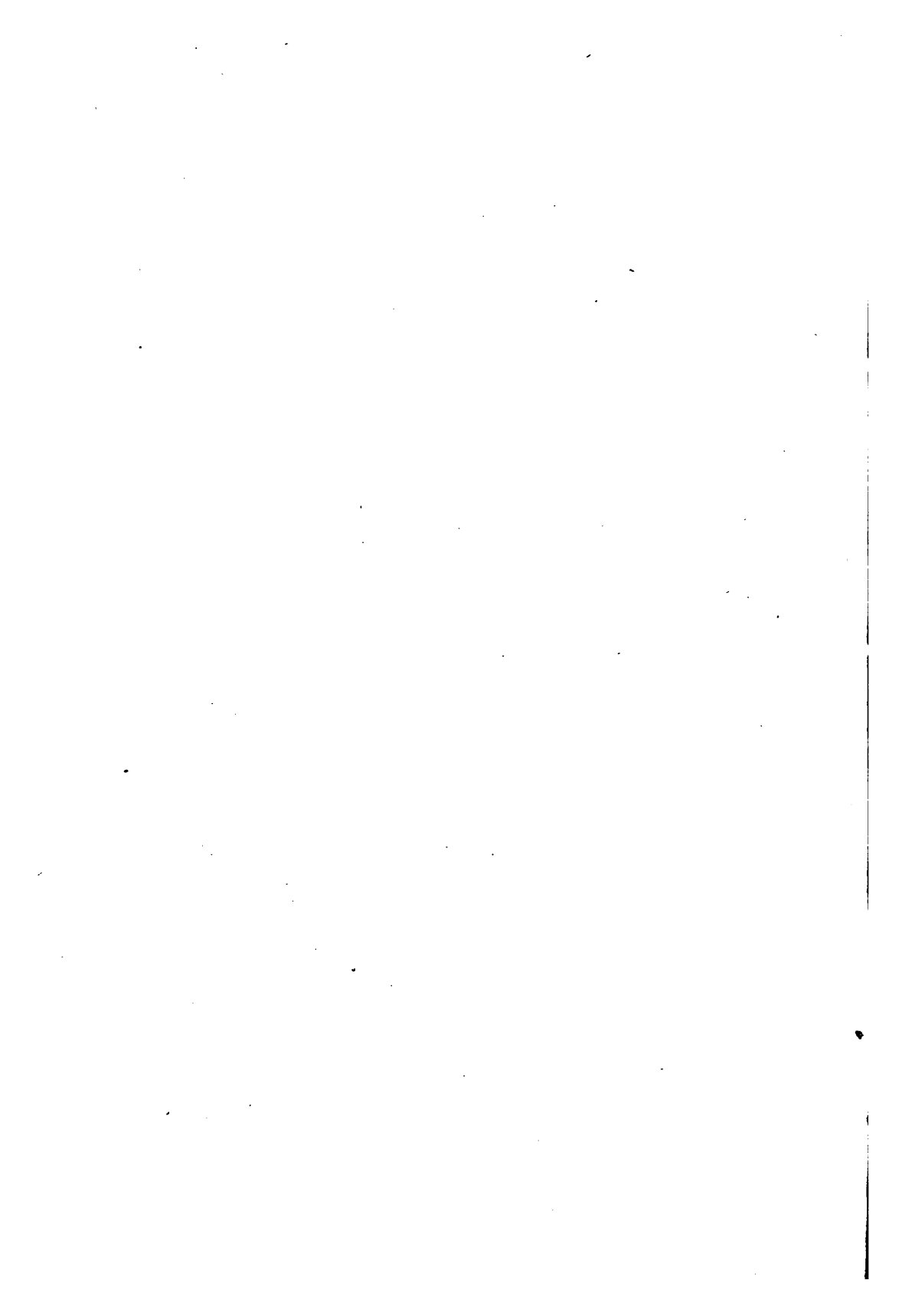
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ORIGINAL COMMUNICATIONS.

SYMPOSIUM ON RADIOTHERAPY.

THE TECHNIQUE OF ROENTGEN RAY TREATMENT.*

BY MIHRAN K. KASSABIAN M.D., OF PHILADELPHIA, PA.

The X-rays were accidentally discovered by Prof. William K. Roentgen of Würzburg, Bavaria, and first reported before the Physico-Medical Society of that place, December, 1895; this discovery resulted in a stimulation of physicists and chemists to renewed investigation of the old atomomolecular chemical theory, which later gave rise to the new theory of "ions" and "electrons" and the subsequent development of the phenomena of "radioactive substances," namely (uranium, radium and polonium). The Roentgen rays were soon found to be an invaluable adjunct in the diagnosis of disease, and in its daily application investigators observed that a dermatitis was easily produced; this suggested that the rays might be of use not only in diagnosis, but also in the treatment of pathological conditions.

As the therapeutic application of the X-rays will be discussed by the other gentlemen participating in this symposium, I will confine myself to a description of the technique, including the methods of other investigators and the results of my own experience.

The method of treatment will largely depend upon the character of the lesion, whether it is benign or malignant, super-

*Read before the Philadelphia County Medical Society, Nov. 11, 1903.

ficial or deep, and upon the susceptibility, general health and age of the patient. As regards the susceptibility of an individual to the action of the X-rays, opinion varies. Kienböck and others have denied the existence of this condition; but Schiff, Freund, myself, and many other investigators, believe in its existence. Hence, to avoid any unexpected accidents, it is well to determine the degree of the subject's susceptibility. This is accomplished by careful and short exposures.

For the sake of a comparative study of the condition, a life-sized photograph should be taken before, during and after the treatment. The photographic plate should be isochromatic, in order that the color value of the tissue may be recorded. To be accurate, these photographs should all be taken in identically the same manner. The prints should be so made as to be equal in density. If an open wound is to be treated, care must be exercised not to infect it; if it is protected with a sterile dressing, do not remove the latter unless opaque ointments are present.

APPARATUS.—The electric current used in the production of the X-rays is generated either by a static machine, an induction (Ruhmkorff) coil or a Tesla high frequency apparatus. The last two are supplied with a current either from a 110-volt direct current or a storage battery. I recommend the Ruhmkorff coil for several reasons. It is portable, compact, and the current can be gauged and regulated more accurately than that obtained by a static machine. Some operators prefer the static machine because, as is claimed, it does not produce a dermatitis. This, however, has not been proven, for dermatitis has been produced irrespective of the machine employed. As regards the size of the coil for therapeutic purposes, a seven to eight-inch spark-producing coil will suffice. One precaution is necessary in the use of a coil. The frequent application of prolonged exposures will injure the insulation of the coil; therefore it is advisable, at the end of every ten minutes exposure, during the treatment to turn off the current and allow the coil and tube to cool.

TYPES OF INTERRUPTERS.—Interrupters are divided into mechanical and liquid. The former is usually employed because of its cleanliness and easy management; it has 700 to 800 interruptions per minute. The liquid or electrolytic inter-

rupter is tedious to manipulate, requires a high voltage, and sends a heavy current through the primary coil, which injures both the coil and the tube in the prolonged exposures required for therapeutic purposes.

CHARACTERISTICS OF THE CROOKES' TUBE.—There are two kinds of Crookes' tubes: 1. Self-regulating or automatic, such as is produced by Queen & Co. of Philadelphia and Müller of Hamburg. 2. Tubes in which the vacuum is not regulated automatically. The self-regulating tube is used by most operators.

DEGREE OF VACUUM IN TUBES.—Prof. Roentgen divides the vacuum of the tube according to the degree of its exhaustion—namely, a low vacuum or soft tube and a high vacuum or hard tube. Eder, Valenta (*Grundriss der gesamten Radiotherapie*, Leop. Freund, page 167) distinguish the tubes according to the penetrability of the rays—*i. e.*, X₁-rays, which penetrate the bones with difficulty, but the soft parts with ease; X₂-rays, which are also absorbed by the soft tissues; and X₃-rays, which penetrate with ease both the bones and the flesh.

Kienböck (*Klin. Wochen.*, 1900) divides the tubes into five degrees of hardness, corresponding to different degrees of exhaustion: 1. Very hard tubes, which give no Roentgen light. 2. Hard tubes, producing a bright image on the screen with but little contrast. 3. Medium hard tubes, giving a well-contrasted image on the screen. 4. Soft tubes, rich in Roentgen rays of slight penetration. 5. Very soft tubes, giving no Roentgen light.

Albers-Schönberg (*Fortschritte*, vol. iii., page 140) uses the improved Walter tube with regenerator and water cooling, designed by Müller of Hamburg. He distinguishes four degrees of Hardness: 1. Hard, giving a gray image of the bones of the hand on the screen. 2. Medium soft, giving soft, grayish-black image. 3. Soft, giving a deep-black image. 4. Very soft.

These various divisions of the vacuum of a tube are arbitrary, and do not indicate a definite degree of exhaustion. The vacuum of every tube is subject to constant changes, dependent upon length of time in use or disuse, upon changes in temperature, disintegration of the basic metals in the tube, etc. The action of the X-rays depends upon the degree of the

vacuum. It is my opinion that the rays coming from a low vacuum or *soft* tube produce a rapid tissue change and the early production of a dermatitis. The rays emanating from such a tube are less penetrating and more easily absorbed by the tissues than those produced by a high vacuum or *hard* tube. These observations have been confirmed by Kienböck (*Wien. klin. Woch.*, 1900, vol. viii., page 1153); Sharpe (*Archive of R. Rays*, 1901, vol. v., page 83); Scholchitz (*Wien. klin. Woch.*, 1900, vol. xiii., page 53); Strater (*Deutsche med. Woch.*, 1900, Ref. Hahn), and others.

Hence, when a quick reaction is desired and in the treatment of superficial conditions, a low vacuum tube should be used. A high vacuum or *hard* tube is generally employed when the diseased condition is deep, such as carcinoma of the uterus, stomach and larynx. The rays of this tube penetrate deeper than those of the low vacuum tube. It is safe to always employ the *hard* tube, whether the condition is deep or superficial, as it is less likely to produce a dermatitis.

POSITION OF THE TUBE.—The position of the tube is of very little importance. The majority of physicists believe that the rays are thrown at right angles from the anodal plate, and claim that the most active portion of the tube is the center of the phosphorescent hemisphere. I believe, however, that the rays within the tube are equal in all directions. The position of the tube in the treatment of such conditions as carcinoma of the cervix, disease of the oral cavity, larynx, stomach or rectum is a difficult matter. If the tube be placed within the cavity or in such a position as to send the rays directly to the diseased area, better results are obtained than if the rays must first penetrate the intervening tissues. For this reason special tubes have been devised by Caldwell of New York and Cossar of London for the treatment of disease of the rectum, vagina and mouth. The Caldwell tube consists of a long, cylindrical projection which fits into a metallic protector; the latter has an opening which corresponds to the area to be treated. The Cossar tube is made of lead glass, which is comparatively opaque to the X-rays, excepting at the end of the projection, which, being made from ordinary glass, allows the rays to reach only the diseased area.

THE DISTANCE OF THE TUBE.—The distance should be

measured from the target of the tube to the surface to be exposed. The distance of the tube depends upon the size of the area to be treated and whether a quick reaction is desired. The nearer the tube, the stronger the rays. Some operators prefer a short distance with short and less frequent exposures. This is a matter of personal experience, and can only be determined by a study of each case.

PROTECTION OF THE HEALTHY PARTS.—The healthy portion of the skin surrounding a diseased area should be protected by an opaque material. For this purpose sheet lead $\frac{1}{30}$ or $\frac{1}{50}$ inch thick is used; it should be covered with a non-conducting material, such as silk or adhesive plaster, and should be grounded by a wire to a water or gas pipe. The lead is perforated corresponding to the area to be treated. Some operators inclose the tube in a wooden box, painted with white lead, having an iris diaphragm. This box is clumsy, and there is also danger of puncturing the tube. I have devised a table, now in use at the Philadelphia Hospital, which can be used both for skiagraphic and therapeutic purposes. It is fitted with a diaphragm so arranged that the rays are projected only to that part of the body to be treated, and does away with the necessity of mask, protectors, etc. The table protects both the operator and the patient from the rays. The distance of the tube from the subject and its position can be adjusted with ease.

FREQUENCY OF THE EXPOSURE.—The frequency of the exposure depends upon the character of the diseased area, whether prompt action is desired, upon the duration of each exposure, and upon the distance of the tube. At the beginning of the treatment it is advisable to expose the patient from two to three times a week for the first two weeks, and then cease treatment for two or three weeks and await the development of any untoward symptoms.

DURATION OF EACH EXPOSURE.—This also depends upon the conditions which influence the frequency of the exposures. Different operators use a different length of exposure. Some resort to frequent but short exposures and with ascending doses, while others employ longer but less frequent exposures.

Albers-Schönberg never gives more than ten-minute exposures on the first and second days. If the skin remains normal,

he then lengthens the sitting, one-half hour being the maximum length allowed; longer exposures than this should not be given.

I prefer short and frequent exposures, in order to allow the system to become gradually used to the rays.

DOSAGE.—This depends upon whether the condition is superficial or deep, malignant or benign. Some authorities believe in exposing the part to the X-rays until *tanning* or *bronzing* occurs. This cannot always be depended upon, for in dark-skinned people or in negroes, and in the mucous membranes, no tanning can be noticed. I have noticed that itching often indicates the beginning of the reaction. If the treatment is continued after the development of these signs, an erythema, a vesication or a dermatitis may develop. I do not believe that a dermatitis is necessary, and if it occurs it is due to the carelessness of the operator. Such a dermatitis shows that the rays are producing destruction rather than stimulation or construction. I have patients in the Philadelphia Hospital under treatment for four months, who show considerable improvement, but no signs of dermatitis.

By "dosage" I mean the quantity and quality of the Roentgen rays employed in each exposure. Although the clinical manifestations are a guide in determining the amount of reaction obtained, yet they do not indicate the exact amount of X-rays used, I will review the possible methods of determining the "dosage."

(a) *The length of the spark gap* (Parallel) in the secondary coil was the first method of measuring the amount of resistance of a tube. The current jumps from the terminals of the secondary coil on account of the resistance offered to the current by the degree of the vacuum within the tube; therefore the higher the vacuum, the longer will be the length of the spark gaps; and the higher the vacuum, the more penetrating the rays. On this principle is based the spintometer, a French device, which is arranged parallel to the Roentgen tube and measures the length of the sparks. The length of the spark depends upon the resistance of the tube, and the latter depends upon the degree of vacuum which, influencing the quality and quantity of the rays, gives us a means of measuring the X-rays.

(b) *Skiameter*, employed first by Prof. Roentgen, consists of a different number of layers of aluminum sheets, on which the

rays are projected. The number of plates penetrated by the rays determines the penetrability of the latter.

(c) *Radiochromometer* (*Arch. d'électricité médicale*, March, 1902). This ingenious device, invented by a Frenchman, M. L. Benoist, consists of a transparent scale of layers of aluminium, increasing in thickness very much like the photometer usually employed in photography. The transparency of a single step of the scale is compared with a thin silver plate.

(d) *Chromoradiometer*.—This apparatus was invented by Dr. Guidi Holzknecht of Wien. The quantity of X-rays absorbed by a fluorescent salt which produces reflection of a certain tint is ascertained by comparison with a standard color scale.

(e) *Kiembock's* division is based upon the penetration and appearance of the shadows of the bones of the hands on the fluorescent screen at a certain distance. This is not very reliable, as the fluorescent screen (platinobarium cyanid) may vary in color and sensitiveness, and also be injurious to the hand of the operator.

(f) *Color of the Phosphorescence of the Tube*.—Some observers rely on this method, but it should be borne in mind that the color has no influence on the intensity of the rays (because the phosphorescence depends upon the composition of the glass from which tube is made). It is necessary to darken the room in order to see the color of the tube. The tube made of glass containing borax fluoresces blue color; but most tubes are constructed of Thuringen glass, and give a greenish-yellow hue. Under this division I should also like to mention the "state of hotness" of the platinum anode, which has no bearing whatever on the character of the rays, because the redness depends upon the amount of current passing and the thickness of the anode.

(g) *Voltage and Amperage* of the current going to the primary coil during exposure. The use of the voltmeter and ammeter is the most accurate method at present of determining the amount of current going to the primary coil. In its employment, however, it is necessary that the therapist should be well acquainted with his coil and interrupter, as the induced current depends largely upon the construction of the coil and interrupter. Many authorities claim that there is no need for

the standardization of X-ray technique ; but that the clinical results, and not certain adopted methods, be the guide in all X-ray procedures. This may often be practical, but not scientific, and until the X-ray technique has become systematized, so long will the attainment of accuracy and perfection of this art be retarded. Hence I suggest that all operators keep and publish a complete record of their cases, to show the details of their methods and the results attained. By comparison we may soon be able to place this branch of medicine on a scientific basis.

Although still in a more or less experimental stage, yet both the theory and technique of Roentgen-ray treatment have made rapid progress during the last four years, and will undoubtedly make still greater advances as our experience in this field of work grows wider.

THE TREATMENT OF CARCINOMA AND TUBERCULOSIS BY
MEANS OF THE ROENTGEN RAYS.*

BY G. E. PFAHLER, M.D., OF PHILADELPHIA, PA.

As a basis for the conclusions to be drawn in this paper, I have selected only a few cases, each of which illustrates some special point of interest. I have omitted many of the details because of the limited time, and because such details would not be of much interest to the general practitioner.

CASE 1.—Mrs. K. E., aged 84 years. Referred by Dr. Ulrich of Chester, Pa. The diagnosis was carcinoma of the right breast. Operation was contraindicated on account of the patient's age and on account of the condition of her heart. The growth was of one year's duration. There was a distinct retraction of the breast below the nipple, making a groove about $2\frac{1}{2}$ inches in length. In connection with this there was a hard mass about the size of a hen's egg. Surrounding this central mass there were other masses of lesser size and of less density. The overlying skin was healthy. There was no axillary or supraclavicular involvement. Treatment was begun April 20, 1903, and exposures were given daily for two weeks. Each exposure was of ten minutes duration, at a distance of 15 inches, with a high vacuum tube and 3 to 4 ampères current.

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The treatments were then given three times a week for a period of six weeks, then twice a week for ten weeks, and once a week for two weeks. She had fifty-seven treatments in all, the length of each exposure was gradually increased from ten minutes to twenty-five minutes. After the first week there was improvement in that the semisolid masses disappeared. At the end of two weeks the central mass seemed to be a little softer. From this time there was constant improvement. The mass gradually became softer and smaller until it disappeared. The points of special interest in this case are the early and constant improvement, and the absence of any dermatitis, in spite of the unusually long exposures. In no other case have I been able to give nearly so long an exposure without producing a marked dermatitis. As a whole, it is one of the most remarkable cases that I have seen.

CASE 2.—Mrs. K. J., aged 40 years. Diagnosis, recurrent carcinoma of the left breast. She had been operated upon twice by Dr. Sanford of Memphis, Tenn. The first operation was performed one month after the growth was first noticed, May 7, 1900. A growth reappeared one year later, and was removed December, 1901. A recurrence developed in July, 1902. X-ray treatment was begun in October, 1902, at which time there was an induration involving the entire scar and about once inch on either side, with nodules in the axilla and the left supraclavicular region. There was also an induration in the right breast. Both mammary, axillary and supraclavicular regions were treated. Seventy-five treatments in all were given, between October 11 and May 31, when the carcinomatous tissue seemed to have disappeared. Treatments have been given since that time at intervals of two to four weeks for the purpose of preventing any recurrence or any involvement of the mediastinal glands. The patient's general health before treatment was failing, and she was not expected to live six months. Her general health improved while under treatment. A dermatitis was produced on two occasions, each of which seemed to be followed by distinct improvement.

CASE 3.—Mrs. J. W., aged 48 years. Recurrent carcinoma of the left breast. She was operated upon by Dr. Wharton in June, 1902, one month after the growth was first noticed. The whole breast and the axillary glands were removed. A recur-

rence was first noticed in November, 1902. X-ray treatment was begun January 22, 1903. At this time nodules from the size of a pea to that of half a walnut were found scattered through the field of operation. A small indurated gland could be felt in the left supraclavicular region. Twenty-six treatments were given between January 22 and April 7, 1903, when a burn of the second degree had been produced. The growth had lessened very much, both in size and induration. Treatment was discontinued. The thyroid gland, which was large at the beginning, now grew rapidly, and the patient developed the symptoms of exophthalmic goiter. She was taken to the Presbyterian Hospital, where the burn healed, the thyroid gland decreased rapidly in size, and the general health of the patient improved. The patient then developed pain in the axilla, and Dr. Newcomet reapplied the rays, which produced another burn, which developed after leaving the hospital. I advised her to go to the seashore and allow the burn to heal. While there a recurrence developed upon the site of the burn without the burn healing.

The third case to all appearances was similar to Case 2. The results have been very different. The case is instructive, because of the idiosyncrasy against the rays, since less rays were used than in either of the two previous cases. It also shows that a severe burn is no proof against carcinoma; also that it is wrong not to keep a case under observation while a burn is healing, or even when a good result is obtained the case should be watched.

CASE 4.—Miss D. B., aged 16 years. Referred by Dr. L. Webster Fox. A case of retrobulbar sarcoma, the diagnosis being confirmed by microscopical examination. The antrum of Highmore had been previously curetted by Dr. E. B. Gleason. The growth again rapidly infiltrated the sinuses. The patient had been examined by Dr. Walter Freeman. She had also been examined by Dr. W. L. Rodman, who refused to operate and advised X-ray treatment. No one expected the patient to live. At the time of beginning treatment the patient was too weak to stand, complained of severe headache and pain in the eye. There was a marked bulging of the eye from the orbit, and a protusion of the conjunctiva. The case was treated daily with 5-minute exposures, with a high vacu-

um tube, and 3 to 4 ampères of current, at a distance of 12 inches. At the end of a month the swelling had almost disappeared, the pain was less, and the patient was well able to walk around and left the hospital. There had been an erythema present for two weeks. She was then treated twice a week for a month, at the end of which time she could open her eye slightly, and felt fairly well. She was then treated once a week for two months, when she was apparently well, except for occasional pain in the region of the inner canthus. She is still being kept under observation and occasional treatment. There was no loss of sight.

This case is important: (1) because it was a sarcoma; (2) because of its extensive infiltration; (3) because of its prompt and constant improvement; (4) because there was no injury to the organ of sight as a result of the treatment.

CASE 5.—Mrs. A. S., aged 69 years. Epithelioma of the face. Referred by Dr. J. M. Anders, July 3, 1903. During the previous two months an epithelioma had been developing upon the right side of the nose, and extended upon the bridge of the nose. It was completely removed by twenty exposures, covering a period of two months. The cosmetic result is perfect. There is no scar, and the skin is smooth and of a pink color.

CASE 6.—Mr. S. G., aged 60 years. Epithelioma of the mucous membrane. Referred for X-ray treatment by Dr. Hollopeter. Ten years ago a warty growth developed upon the lower lip. He began treatment at a sanatorium near Boston, July, 1900, where caustics were used. He remained there eighteen months, at the end of which time he came to Dr. Hollopeter, and was referred to me. His mouth could then not be opened except to admit the little finger, and this gave him severe pain. The growth involved the right angle of the mouth and the greater part of the cheek. There was an enlarged gland in the right submaxillary region. The gland disappeared in about a month under treatment, but the growth itself, being mostly in the mouth, slowly but gradually increased in size and the amount of pain increased. The case was inoperable from the first, but the rays had little influence except perhaps to slightly retard the growth. Ninety treatments were given.

Cases 5 and 6 are important because of their differences. In the first the epithelioma was entirely superficial, involved

the skin, had never been tampered with by caustics, was treated early with the X-rays, and yielded promptly with perfect results. In the second the epithelioma was not entirely superficial, involved the mucous membrane, had been tampered with by caustics for eighteen months, X-ray treatment was begun late, after the growth had started to spread, and a long course of treatment was given with practically no results.

CASE 7.—Miss A. N., aged 20 years. Tuberculous adenitis. Referred by Dr. Ernest La Place. She had had tuberculous adenitis for nine years, and had been operated upon by Dr. La Place three years ago, and again one year ago. She was referred for X-ray treatment February 9, 1903, on account of swelling of the glands upon both sides of the neck, and because of an indurated scar upon the right side of the neck. After ten treatments the scar and the glands were softer. After six weeks and fifteen treatments the scar had almost faded and the glands were almost imperceptible. After five months and thirty-four treatments the glands were imperceptible, and the scar was soft, pink, and barely noticeable.

CASE 8.—Miss J. F. aged 16 years. Referred by Dr. W. L. Rodman, March 3, 1903. Diagnosis, tuberculous adenitis and tuberculous ulcers of the legs. She was operated upon one year ago, when the glands were completely removed from the left side of the neck, from the lower portion of the right side of the neck and from the right axilla by Dr. Rodman. At time of beginning treatment there was enlargement of the post-cervical glands and a distinct enlargement just below the right ear. There were also three ulcers upon the right leg, varying in size from $\frac{1}{2}$ inch to 2 inches in diameter. She has been given forty treatments, covering a period of eighteen weeks. The two smaller ulcers upon the leg healed within a month. In six weeks the largest gland had ruptured and healed. At the end of four months the enlargement of the gland had disappeared. The largest ulcer upon the leg had been reduced to one-third its original size, and had a healthy appearance, but needed support of its circulation. Dr. Burns then applied an elastic cast and the ulcer healed in three weeks.

The above two cases are important because they show undoubtedly a good influence of the rays upon the tuberculous glands and ulcers.

CASE 9.—Miss K. B., aged 30 years. Referred by Dr. La Place, under whose care she had been for fifteen years. Diagnosis, lupus vulgaris. At the time of beginning treatment the diseased area covered the greater part of the anterior portion of the face and the entire nose. A distinct reaction was produced in two weeks by seven exposures. Following this reaction the tubercles were leveled to the skin and desquamation took place. She has been given eighteen treatments in four months, and is practically well.

I do not report this case on account of the lupus, since that phase of the subject will be fully dealt with by Dr. Schamberg, but because of another very interesting and remarkable coincidence. When she began treatment, and for eight years previously, she had been quite deaf, so that it was difficult to make her hear. At the end of the course of treatment she could hear ordinary conversation. This remarkable result was unthought of, and therefore no accurate observation had been made before treatment; but eight years ago a specialist in New York had examined her and pronounced her deafness incurable. The result suggests that the rays may be of value in some forms of deafness.

In conclusion, I am convinced:

(1) That the X-rays are of undoubted value in the treatment of certain cases of both superficial and deep-seated carcinoma and tuberculosis.

(2) That the more a case has been tampered with, the less likely it is to yield to the influence of the X-rays, *e. g.*, Case 6.

(3) That daily treatments, carefully and properly given, will produce the best results, *e. g.*, Cases 1 and 4.

(4) That we should try never to produce a dermatitis beyond a simple erythema.

(5) That there are idiosyncrasies in certain people which render them most susceptible to the X-rays, and in these people deeper burns may occur in spite of the most careful treatment. Case 3.

(6) That epithelioma involving the mucous membrane is much less likely to yield to the effect of the X-rays than when it simply involves the skin, *e. g.*, Case 6.

(7) That there is not likely to be any interference with the sense of sight, even though the X-rays are used directly over the eye. Case 4.

(8) That tuberculosis, whether of the skin or of the glands, will yield, at least in certain cases, to the effects of the X-rays.

Cases 7. 8 and 9.

(9) That the X-rays may be of value in certain cases of deafness.

(10) That the X-rays will give better cosmetic results than any other form of treatment in simple epithelioma of the face. Case 5.

(11) That epithelioma of the mucous membrane should be removed as early as possible by the knife, and this followed by X-ray treatment.

(12) Operable cases should be operated upon, and in each instance followed by a course of X-ray treatment, and X-ray treatment should be given at the first sign of a recurrence.

(13) Inoperable cases should be given a trial with the X-rays, since even hopeless cases sometimes yield to this form of treatment. Case 4.

(14) It is desirable to produce a distinct reaction in the treatment of lupus. Case 9.

ROENTGEN-RAY TREATMENT OF THE EYE AND ITS APPENDAGES.*

BY WILLIAM M. SWEET, M.D., OF PHILADELPHIA, PA.

No remedial agent introduced to the attention of the profession in recent years has proved of so much value in the diagnosis and treatment of certain ocular affections as has the Roentgen rays. Over six years have passed since the rays were first employed in the diagnosis of foreign bodies in the eyeball, and since that time many eyes have been saved by their aid that otherwise would have been lost. Of the several methods of diagnosis available, the X-rays is the only possible method of determining in ocular injuries from iron or steel, brass, shot, glass, or similar substances, whether the material causing the injury has simply wounded the globe, or has penetrated and lodged within its coats or in the orbit. Most of the injuries are due to the entrance of particles of iron or steel; and the entrance of the chip of metal, often covered with grease and dirt, into the interior of the eye is a serious form of injury. Even with prompt removal of the material the eye may be lost by

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infection or severe iridocyclitis. By the employment of accurate methods of localization, which indicate the situation of the metal and its approximate size, and the use of powerful magnets, the percentage of successful extractions of foreign bodies from the eye is greater than it was a few years ago, and even better results may be expected in the future with the more general recognition on the part of the profession of the importance of early diagnosis in these ocular injuries, and the prompt removal of the metal, if shown by the X-rays to be situated in the eye-ball.

It is generally impossible in injuries from small particles of metal to determine without the aid of the X-rays whether the metal has penetrated into the interior of the eye. Small entrance wounds in the sclera are difficult of recognition, while opacity of the lens prevents a view of the vitreous chamber. In all cases, therefore, of injury to the eyes of workmen engaged in occupations in which particles of metal are liable to break from the tools or metals they are working, and in which there is a decrease in the vision following the accident, a radiograph should be made at once. Nothing is to be gained by waiting until the local signs of inflammation have subsided, since valuable time is thereby lost in removing an injurious substance from the eyeball, and the delay of several weeks may result in the formation around the body of a fibrocellular exudate that will resist all attempts at extraction. Negative findings by the X-rays are equally valuable, ensuring that a foreign body is not retained in the eye to cause future trouble.

In a series of 102 cases reported by the author two years ago, the rays showed a foreign body in the eye in sixty-one. In forty-five cases an attempt was made to extract the body, and was successful in thirty-two; but in six cases subsequent enucleation was required. When it is considered that with the exception of ten cases all these patients were treated by the attending physician on the expectant plan, and weeks and months elapsed before an attempt was made to locate and remove the foreign body from the eye, it is surprising that the percentage of lost eyeballs was not greater. During the past two years the value of the X-rays as a means of diagnosis in ocular injury has become more generally recognized, and the prompt removal of the body has resulted

in the preservation of a larger proportion of eyeballs with useful vision.

The value of the X-rays in the treatment of certain forms of superficial growths in the region of the eyelids, such as epithelioma and rodent ulcer, has been fully demonstrated, and I believe we are no longer justified in resorting to the extensive plastic operations formerly required for growths of this character, with the subsequent scarring of the face. I have treated over twenty cases of epithelioma of the eyelids and structures adjacent, and in every instance except two have succeeded in healing the ulcerated area, the new tissue replacing the disease presenting to all appearances the characteristics of a healthy skin. In one case the area has remained healed for over one year. In one case of failure to relieve the disease entirely the orbit was implicated, and the only hope of cure depended upon removal of the shrunken eyeball, which was refused by the patient. In the other case, a large rodent ulcer of the side of the head, the rays acted satisfactorily for several months, but recently the disease has spread and affected the external canthus. This man shows to a marked degree the effect of the rays upon the central nervous system, to which attention has been previously called by other operators. Exposure with a tube of even moderately high vacuum causes a dulling of his faculties the next day and interferes with his work as a salesman.

The latest application of the rays in the treatment of chronic affections of the eyelids, such as trachoma and vernal conjunctivitis opens up a new field which gives promise of successful results. In the few cases of these diseases in which I have employed the rays there was shown a decrease in the infiltration of the conjunctiva and a lessening in the number and size of the granulations, but in none has there been a cure. Few of the cases have been under observation sufficiently long to indicate the probable effects of treatment. So far as the published reports of cases may be judged, the results in trachoma offer promise of some success, while in several instances of vernal conjunctivitis there has been an entire disappearance of the granulations, both from the eyelids and at the corneal junction. In these later cases the apparent cures have been secured during the warm weather, a period in which the usual remedies fail to make any impression upon the infiltrated structures.

ROENTGEN-RAY TREATMENT OF KELOID.*

BY HENRY K. PANCOAST, M.D., OF PHILADELPHIA, PA.

In dealing with keloid, the X-ray worker has a different problem at hand than that in the treatment of malignant growths. Instead of directing our attention to a tumor that sooner or later must kill the patient if the X-rays, or perhaps radium, do not succeed, we have a growth that causes only disfigurement, and sometimes pain, and these are the chief reasons for surgically ridding the patient of such neoplasms. The almost certain recurrence following removal by the knife or caustics, etc., has led to recourse to the X-rays in an attempt at permanent cure. From my own experience, it seems possible to remove keloids, in a measure, by the X-rays, but the possibility of recurrence after such treatment cannot yet be given. Experience also shows that the scar resulting after apparent cure will still be somewhat disfiguring, though to a much less extent than before the X-ray applications. The treatment is certainly a very long one, and requires great patience on the part both of patient and operator in continuing to the end a possibly successful method of treatment. In patients of the colored race there is an almost certain chance of partially destroying the pigment layer of the skin, and this seems to be more marked in the darker-skinned or more pure-blooded negroes, but is just as noticeable in the X-ray treatment of any tumor. Therefore the restoration of the tissues to the normal appearance of the part cannot be promised. I have noticed this particularly when the growth has involved the helix and the lobule of the external ear.

In the following cases reported particular points will be brought out, though some of them will be of no special interest:

CASE 1.—B. F., female, colored, aged about 21 years, referred by University Hospital Ear Dispensary, was presented for treatment of a keloidal growth of the lobule and helix of the left ear, following piercing of the ears some years before. Treatment was begun November 3, 1902, and continued until January 21, 1903, thirty-four treatments, or an average of three per week, being given. Each application was from ten to

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fifteen minutes, and with a moderate vacuum tube eight to twelve inches from the skin. Burning of the skin over the growth was present a great part of the time, but was controlled by applications of zinc oxide ointment and gave no trouble. Thiosinamine was tried early (November 15, 1902) in 3-grain doses, given at bedtime, as this was found to be the best time for administration of this drug. The patient stood the drug remarkably well, and the quantity was increased to an additional morning dose January 8. An assistant took charge of the case from January 21 to April 4, and unfortunately the records were lost, but we can safely say that the number of applications during that time was at least fifteen. From April 4 to June 8 the patient was nearing a cure, and came once a week only for a 5 or 6-minute treatment. She was not a darkly pigmented woman, and the loss of pigment was not marked. The ear had not returned to its apparently normal appearance when we told the patient she was "cured." We consider her sixty or more treatments a quick cure. The woman was told to return at intervals, but she has not done so, and whether or not there is a recurrence cannot be truthfully stated.

CASE 2.—L. W., male, colored, aged about 55 years, with multiple keloidal growths of the dorsum of each hand and wrist, and each side of the neck and cheek, following a burn from a powder explosion. Treatment was started July 26, 1902, and continued until August 11, when the patient stopped coming, after having had six 10-minute treatments to the right side of the neck, three to the left side and right hand, and one to the left hand. The only fact to be reported is the patient's enthusiasm in believing that the stiffness of the neck and wrists was benefited. The difference between hypertrophied scar and keloid is of no importance.

CASE 3.—A. C., mulatto, female, single, aged 27 years, cousin of Case 4. Personal and family history negative. Both ears were "pierced" at the age of 16 years, and the growth in each ear was noted three years later, involving the lobule. It increased steadily, and four years ago began to spread to the helix of each ear, the neck below the ears and the angles of the jaw. There has been no pain. A scar on the left hand since childhood has shown no keloidal or hypertrophic tendency. On the diagnosis of keloid, treatment was begun Feb-

ruary 14, 1903, and until May 10 thirty-one treatments were given (record missing), averaging three applications a week to each side. There was no great improvement, as treatments have not been pushed.

CASE 4.—Mrs. K. B., colored, female, aged 39 years, referred by Dr. M. H. Biggs. History negative, except typhoid fever at age of 26. This was followed by an abscess on the right side of the neck. The abscess was opened and treated. After marriage she noticed that the scar of this operation began to grow steadily and increased in size as she bore children. The growth was removed eleven years ago, but recurred. A separate tumor made its appearance back of the ear at about the same time. When examined on admission, a keloid growth was found on the right side of the neck below the ear and extending over the angle of jaw. Back of the auricle there was a separate growth with no resemblance to the keloid. She complained of insomnia and severe pain in the face, neck and right arm, which was thought to be due to the growth, but subsequently found to be accounted for largely by another cause. These symptoms were for a time controlled by coal-tar products. From August 31 to December 31, 1902, thirty-eight treatments were given, averaging about three per week, with intervals of from one to three weeks at times. Thiosinamine was used, but was not borne well by the stomach. The applications started with 10-minute exposures, increased to 20 minutes, and the tube was moved from 12 inches to as close as it could be stood. After sixteen such treatments there was intense pain in the face, and soon an abscess formed under a large part of the growth. This was opened October 10, and a large quantity of thick, greenish, foul-smelling pus was evacuated. The inflammatory process had entirely disappeared in three weeks, and treatment was again started. It was evident that in this interval there had been a marked subsidence of the keloid growth. Until November 23 the applications were less severe, but from then until December 10 the treatment was stopped because of pain in the diseased region and a burn of the skin, and it was thought another abscess was forming. From December 10 to 31 the sittings were regular, but during this time numerous pits filled with a soft caseous material were found scattered over the growth and penetrating deeply.

They have not been noted of late. During December the patient suffered intense pain in the neck and arm of the affected side, and the question of a cervical rib arose. Examination and the skiagraph gave a positive proof of this condition—a double cervical rib. On January 4, 1903, the patient had to be admitted to the University Hospital because of pain and swelling in the right arm, due to the cervical rib, but she was discharged in a few days. Since January 4 treatments have been pretty regular, with intervals of rest. Sloughing of the skin over the growth required a cessation for ten days in the latter part of January, and later another abscess formed, and was opened February 11 and the same kind of pus evacuated as before. Healing was rapid, and treatment was started again February 25. It was again noted that there had been a decided decrease in the size of the keloid growth, following the suppurative process. From February 25 to August 4 there were forty-eight applications of from ten to fifteen minutes duration, with the tube 10 or 12 inches away. A month of vacation followed, and on Sept. 7 the tumor behind the ear was removed. After healing of the wound twenty treatments were given until October 31, when again there were signs of an abscess under the growth. It seems that treatment was stopped just in time, for we were able to avoid opening the abscess, and now only a slight dermatitis is present, and we expect a further subsidence of the growth. All of these periods of suppuration have been attended with marked constitutional symptoms. Prompt healing and resolution seem to favor a *mild* infection if any is present: but no cultures were taken. Now all signs of suppuration have disappeared.

In this case there are several questions to consider. When shall treatment be stopped? This is a difficult matter to decide, in view of the fact that a return to the normal appearance cannot be expected. I am inclined to continue with long, frequent exposures, with the tube close to the patient, and to expect repeated recurrences of the suppurative process, but stopping short of pointing and of burning the skin. Milder treatment seems to have little effect. Having already treated the case over a year, another year will likely be required to effect a cure, and I do not expect a complete disappearance. Recurrence is an uncertain factor. It is not likely that the

pigment will return, as many negroes are known to "turn white" in spots. The lighter in color the skin, the less important is the loss of pigment.

No satisfactory explanation can be given for the suppuration, but it was the result of necrosis under the growth, and probably dependent on blood-vessel changes. As there was a marked subsidence and flattening of the tumor after each period of suppuration, the necrotic changes were probably in the keloid tissue itself, and not to any extent in normal underlying structures.

We are in doubt as to the nature of the tumor back of the ear. It has been diagnosed a fibrolipoma, but sections have not yet been made. There was a very slight reduction in size and some softening, but it did not react like the other growth. Treatment of the area it occupied will be carried out to prevent keloid formation, as the wound did not heal by first intention.

CONCLUSIONS: (1) Keloids are amenable to X-ray treatment, but it is long and tedious, and does not completely restore the normal appearance. (2) Future cases will be operated upon first, and the rays subsequently applied in an effort to prevent recurrence.

THE FINSSEN LIGHT AND THE ROENTGEN RAYS IN THE TREATMENT OF DISEASES OF THE SKIN.*

BY JAY F. SCHAMBERG M.D., OF PHILADELPHIA, PA.

It is a remarkable fact that within less than a decade three forms of radiant energy have been brought into use in the treatment of disease. The employment of radium is still in an experimental stage, but concentrated actinic rays of light, as employed by Finsen, and the Roentgen rays have been accorded an established position as therapeutic agents.

The purport of this paper is to record the results of treatment of a considerable number of skin diseases with the actinic rays of light and with the X-rays. One hundred and eleven patients were treated in all, of whom fifty-eight received treatment in the Phototherapeutic Laboratory of the Philadelphia Polyclinnic,

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The light apparatus in use at the Polyclinic is the so-called London Hospital Lamp, which was brought from London about eight months ago by Miss Kirkbride, under whose personal supervision the treatments have been given. The lamp is a modification of the Lortet and Genoud apparatus, which is much used in France.

This lamp differs in many respects from the original large lamp used by Finsen. Finsen's lamp consisted of two cylinders fitting telescopically into each other, thus permitting approximation or separation of the lenses. Each cylinder was provided with two piano-convex lenses. Between the two sets of lenses was a layer of ten liters of distilled water. At the end of the apparatus were two flat glasses, between which was a solution of the ammoniosulphate of copper. The intensity of the arc light varied from thirty-five to fifty ampères. I understand that the copper solution has been replaced by running cold water, and that a current of eighty ampères is now used. The exposure was at first two hours, but has been since, owing to improvements, reduced to one hour.

The simplified lamp in use at the Philadelphia Polyclinic consists of an arc light with adjustable carbons, in front of which is a hollow metal shield or jacket. Set in the center of the jacket and attached to the inner and outer surfaces are two quartz lenses. When the lamp is in use cold water is kept circulating between the lenses and in the metal shield surrounding the lenses.

The lamp may be operated with an alternating or a direct current. At the Polyclinic a 110-volt alternating current was used, with a strength of fifteen to sixteen ampères.

The area of the skin to be treated is pressed firmly against the outer lens, which may be changed according to the contour of the part to be treated. It is essential to press out the blood and render the skin anemic, otherwise the blood acts as a red screen and filters out the actinic rays. In the original Finsen light the rays of light are focused upon the skin, local exsanguination being effected by a separate compressing lens. In the lamp just described the light is not brought to a focus, but the contact of the patient with the lens enables the rays to reach the skin before they diverge. The running water and the passage of the light through the rock-crystal lenses filter out the heat rays, so that the light is perfectly cold.

RESULTS OF TREATMENT AT THE PHILADELPHIA POLYCLINIC WITH THE LONDON HOSPITAL LAMP.—The lamp has been in use since March 12, 1903, during which time 897 treatments have been given to fifteen patients. Three of these patients had but few treatments, and will be referred to later. The remaining twelve patients came regularly, and received in all 880 treatments. The sittings varied in duration from thirty minutes to one hour and three-quarters, most of them lasting one hour; in the beginning the treatments lasted thirty minutes; but it later became necessary to extend the period in order to secure the proper degree of reaction. The average duration of the sitting was perhaps three-quarters of an hour. An effort was made to secure as deep penetration as possible, and with this end in view long treatments were given. Of the twelve patients, seven had lupus vulgaris and five had lupus erythematosus.

The results have not been such as to make us very enthusiastic. Of the cases referred to none have been cured by the "light" treatment, although improvement has occurred in some. It should be stated that none of the cases were of recent development, save possibly one; the majority were of long standing and inveterate. The treatment was carried out with great care by Miss Kirkbride, who had an opportunity while in London of observing the treatment in the London Hospital. The patients came regularly for many months, and gave themselves up fully to the treatment. The use of a lens the size of a silver dollar enabled the operator to cover comparatively large areas in a short time.

The disappointing results which we have obtained should not be interpreted as indicating the failure of concentrated light in the treatment of lupus, but should rather be regarded as evidence of the insufficiency of the simplified lamps which are being put upon the market. Wherever the big lamp employed by Finsen is used the results are said to be highly gratifying. It was thought that the modified lamp would suffice and have certain advantages over the original one. It is much less expensive, less cumbersome, costs less to operate, and permits of the treatment of a larger area of skin at one time. With the big lamp only an area the size of a cubic centimeter is treated; whereas with the small lamp an area the size of a silver

dollar can be covered. In the former, however, the light is concentrated to a focus on the skin, and the effect is more intense.

It was also thought that the use of the Lortet-Genoud type of lamp would lessen the time of exposure, but we have found it necessary in long-treated cases to increase the exposure to one hour or more to secure the desired reaction. And this increased exposure has not been necessitated by the occurrence of pigmentation. Our experience has been the same as that of Hyde and Montgomery, namely, that little or no pigmentation occurs as the result of treatment in a diseased skin. The healthy skin, however, is rapidly pigmented. The exposure of my arm to the light for ten minutes was followed by an erythema, which gave way to a *café au lait* pigmentation lasting five months.

Our experience would lead us to believe that the small lamps do not give sufficient penetration to destroy deep-seated lupus nodules. We have been able in most instances to secure a pronounced surface reaction, but it is evident that it is not sufficient. While Paris physicians claim to have had a considerable measure of success with the small lamp, the limitations of this apparatus are recognized at the London Hospital, where it is used only on superficial lesions, a large Finsen lamp being employed for the more deeply-seated nodules. Finsen himself insists upon the superiority of the big lamp. The current strength used in the Finsen lamp is very much greater than that utilized in the lamps of the Lortet-Genoud pattern.

THE USES OF THE FINSEN LIGHT.—Actinotherapy has been employed chiefly in the treatment of lupus vulgaris and lupus erythematosus, and it is in these affections that it finds its principal field of usefulness. Varicose tuberculides, rodent ulcer and acne vulgaris have been cured by the Finsen light, but more uniformly successful results are obtained with the X-rays. Finsen has subjected forty-nine cases of alopecia areata to the light treatment, with thirty cures. In eighteen cases treated by Hyde and Montgomery no result was noted in thirteen. They conclude that the treatment offers no marked advantage over other methods.

Finsen reports nineteen cases of nevus vascularis planus treated with "light." In a few instances the disfigurement entirely disappeared; in others the color diminished in intensity.

While none of our cases of lupus erythematosus were cured, the greatest improvement was noted in the case in which the vascular element was pronounced.

THE ACTION OF THE FINSSEN LIGHT AND X-RAYS COMPARED.—Roentgen rays and Finsen light differ very markedly in their action upon tissues. Concentrated actinic rays produce in the course of a number of hours a distinct reaction, usually characterized by erythema and vesiculation. The blistered areas heal up in about a week. Areas of skin that have been repeatedly treated gradually become less sensitive to the influence of the light and require a longer exposure to produce blistering.

There is but superficial penetration of this light, and consequently subcutaneous tissues are not affected by it. A distinct bactericidal influence is exerted. Signs of improvement may be observed at an early date—usually upon the subsidence of the reactive inflammation.

With the X-rays, on the other hand, no immediate reaction is observed in the treated area; the effect of the rays is, however, cumulative, the parts treated becoming progressively more susceptible to their influence. The rays penetrate deeply, acting not only on the skin, but also upon subcutaneous and visceral structures.

Improvement is comparatively slow in making its appearance; it may continue for a long time after the cessation of the treatment. Curative changes may take place without an inflammatory reaction being produced. No direct bactericidal influence is exerted, but tissues are fortified against the invasion of bacteria,

THE COMPARATIVE VALUE OF THE FINSSEN LIGHT AND THE X-RAYS IN LUPUS.—The majority of writers are of the opinion that the Finsen procedure is the best method of treating lupus. With the Finsen lamp the results, according to report, have certainly excelled, both as regards percentage of cures and cosmetic effect, any method of treatment previously in vogue.

The X-rays have also been found to accomplish wonderful results in lupus vulgaris. The observers who have reported cures are too numerous to mention. The cosmetic result is but little, if at all, inferior to that obtained with the Finsen light. Each method has certain advantages over the other.

Moreover, certain forms of lupus will do better under one treatment, and certain others under the other.

The Finsen light can never do any harm to the tissues; the inflammatory phenomena subside at the end of a week or ten days, and the improvement resulting may be accurately estimated. The effect of the X-rays, on the other hand, cannot be known for some time, and consequently the action cannot be so well controlled. This advantage is not as important now as formerly, as the danger of a serious X-ray burn now-a-days is not great.

The Finsen light has the disadvantage that every treatment produces a dermatitis; this is a considerable inconvenience to the ambulant patient, who is obliged to wear some dressing on the face. The Finsen light can only be applied to a very small area, whereas the X-rays may be applied at each treatment to large surfaces. In extensive cases the light treatment requires sittings for many months, and involves a considerable expenditure of money.

The application of both treatments is painless, although a considerable degree of soreness follows each "light" treatment. In the event of an X-ray burn the soreness would be doubtless greater than that caused by actinotherapy.

Lupus of the mucous membranes, particularly of the nose and mouth, cannot be satisfactorily treated with the Finsen light, but responds usually in a gratifying manner to the application of the X-rays. Ulcerative lupus also precludes treatment with the Finsen light, but reacts well to the Roentgen treatment,

Hypertrophic lupus, I think, does better with radiotherapy than with phototherapy, whereas cases with small nodules imbedded in scar tissue will do better with the Finsen light.

Time will determine the special indications of the two methods of treatment and the comparative results obtained. Both therapeutic agencies are of great value, and should be used to supplement each other.

In lupus erythematosus the Finsen light seems to have given better results than the X-rays, although both treatments leave much to be desired. Doubtless many reports of cures will require later revision.

ROENTGEN-RAY TREATMENTS.—The present report includes the records of over 100 X-ray patients, of whom about one-half were treated at the Polyclinic Hospital. They were as follows:

Epithelioma, 27 cases; acne, 14 cases; eczema, 16 cases; psoriasis, 4 cases; sarcoma, 3 cases; lupus vulgaris, 4 cases; acne rosacea, 2 cases; lupus erythematosus, 2 cases; leukokeratosis lingualis, 1 case; rosacea, 1 case; keloid, 2 cases; sycosis, 3 cases; tinea sycosis, 1 case; ichthyosis, 1 case; vitiligo, 1 case; folliculitis, 2 cases; seborrhea oleosa, 1 case; seborrhea sicca, 1 case; mycosis fungoides, 1 case; ulcus cruris, 1 case; eczema seborrhoicum, 1 case; verruca, 1 case; carcinoma of larynx, 1 case; carcinoma of esophagus, 1 case; carcinoma of mouth, 3 cases; dermatitis herpetiformis, 1 case.

Space will not permit of a detailed description of all of these cases. It will doubtless suffice to refer to the results obtained in the various diseases, with brief mention of the more interesting an instructive cases.

Epithelioma.—Other writers are presenting this evening their views of the value of the X-rays in deep-seated carcinoma. I shall confine my remarks to the effect of the rays in cutaneous carcinoma. We have treated twenty-seven cases of cancer of the skin and mucous membranes. It would be misleading to give statistical results, for so much depends upon the character, extent and situation of the growth. Moreover, a number of the patients did not remain under treatment sufficiently long to warrant a proper estimate of the treatment. It may be of interest to state that thirteen of the above cases were cured. Most of the patients cured were cases of superficial epithelioma about the face. A very satisfactory result was obtained in a moderately deep epithelioma of the neck that recurred after excision. Two cases of superficial epithelioma of the lip appear to be well, although sufficient time has not elapsed to warrant a definite statement. A nodular epithelioma of the lip after eight treatments was rather larger than before the rays were used, and the patient gave up the treatment.

With deep-seated skin cancers our results have not been encouraging. Cancer of the buccal mucous membrane is always a dangerous growth and particularly liable to recurrence.

A large proportion of the cases of epithelioma which, in our hands, were cured by the X-rays could doubtless have been successfully treated by other means. Small superficial epitheliomata may be cured by excision, curetting, electrolysis and various caustics. In order that the X-rays shall remain the

method of choice, it must be shown that the rays are superior in effect to the other methods, for the latter accomplish the result in a much shorter time and with less expense to the patient. The liability to the production of a burn is, moreover, to be considered. A distinct advantage of the X-ray treatment is the beautiful cosmetic result attained. Where the avoidance of scarring is an important consideration the X-rays had better be employed, for the resulting cicatrix is smooth and excellent in appearance.

The rays have a special field of usefulness in small epitheliomata situated upon the borders of the eyelids, the alæ of the nose, and in other similar regions. It is desirable for manifest reasons to avoid any unnecessary destruction of tissue in these cases, and no other method of treatment is equal to the rays, which will effect a disappearance of the growth with the least possible deformity.

The X-rays are also of great value in rodent ulcers about the orbit, in those cases in which instead of a tumor above there is destruction of tissue. These cancers are often completely inaccessible to the knife, for there is nothing to remove; the thin border and base are often in apposition with bony structures. Some otherwise fatal rodent ulcers of the orbit have been cured with the X-rays.

There is a third class of skin cancers—the deep-seated cutaneous and subcutaneous carcinomata—which, as a rule, do not do well under X-ray treatment. Where these growths are surgically accessible I believe the best results are obtained by excision followed by X-ray treatment.

Many of the deep skin and mucous membrane carcinomata appear to improve in a striking manner for a time; but not infrequently the disease subsequently relapses and spreads. I believe that in several cases under my observation the carcinoma has spread more rapidly by reason of the inflammatory reaction induced by the X-rays. A similar observation has been made by Hyde and Montgomery. It is, therefore, seen that in inappropriate cases the X-rays may do harm.

In summing up, it may be stated that the X-rays have certain limitations in cancer of the skin. They will cure almost all cases of superficial epithelioma; they will cure many epitheliomas about the facial cavities, and accomplish the result

with less loss of tissue than by surgical methods. They will cure a small percentage of deep cutaneous and subcutaneous carcinomata, but where they do not do good in these cases they may work harm by stimulating extension of the growth.

Acne.—We have treated fourteen cases of acne with X-rays. I am in full accord with the opinion expressed by other dermatologists, that no remedy can approach in efficacy the X-rays in the treatment of this dermatosis. In most cases a distinct improvement is noted after a few treatments; old acne lesions disappear and new ones develop in smaller number. The ultimate result is often brilliant, rebellious and long standing cases yielding to treatment in a short time. What is most gratifying of all is that the cures are as a rule permanent. There may be an outbreak of a few pimples after the treatment has been suspended for a while, but these disappear rapidly under further treatment.

Eczema.—The X-rays have proven themselves to be a valuable remedy in the treatment of some forms of eczema. We have used this agent in sixteen cases of eczema, most of which were of the vesicular variety, occurring about the hands. Inasmuch as other treatment was employed at the same time, it is not possible to definitely estimate how much curative influence was exerted by the rays. From a comparison, however, with other cases of a similar character not receiving X-ray treatment, the conclusion has strongly impressed itself upon us that the X-rays have been an important factor in the cures effected.

The X-rays in proper dosage seem to stimulate the normal structures of the skin to healthier activity. When used in excessive strength they are, of course, capable of doing harm. We have invariably used a weak current and brief exposures, not exceeding five minutes, in the treatment of eczema.

The X-rays are also valuable in many other cutaneous diseases. Among these may be mentioned hypertrichosis, psoriasis, keloid, sycosis, ringworm and favus of hairy regions, and many of the hypertrophic dermatoses.

HEADACHE AND BACKACHE OF MENSTRUATION.

BY CHARLES A. DUNHAM, M.D., JACKSONVILLE, FLA.

So overwhelming is the majority of women and young girls to-day who suffer from "headache and backache" as the frequent precursor and constant accompaniment of the menstrual period that there is considerable danger of our being forced to the unwise and unsatisfactory conclusion that such symptoms may be but normal and physiological; and, if this view should be accepted, the physician doing so is in further danger of being led to the course of offering only such temporary relief as may be obtained from the use of sedatives and anodynes. Naturally, he will consider that his duty is done if he succeeds in obtunding the pains during the time in which they necessarily occur, thus enabling the patient to pass through the ordeal with greater ease and comfort.

But experience has abundantly shown that the victims of this fallacious mode of treatment sooner or later become slaves to the calmative effects of the drugs employed; and, not only are they afforded no really permanent benefit, but are continually rendered more sensitive to their sufferings. In short, the locking up of the secretions and retention of waste solids, resulting from the frequent taking of analgesic medicines, invariably aggravate the abnormal condition of affairs which has been at the base of their troubles from the outstart.

There are to be noted, of course, varying degrees of intensity in the sufferings of these women,—*e. g.*, from the two or three days of slight frontal or temporal headache to the week of intense *migraine*, with its accompanying vertigo, distressing eye symptoms, and gastric disturbances. In the former class of cases the processes of elimination (which are so essential at this time) are almost equal to the necessities of the occasion, and were it not for a slight constipation or other excretory check, not even the temporary headache and depression would be noted; in the other, however, the sewers of the system are more effectually blocked, the circulation becomes charged with obnoxious waste, and the serious chain of symptoms arises which indicates the retention of this debris in the blood, and which we now believe to be the true source of the evils we are considering.

To the painstaking study and investigations of Haig of London, more than to those of any other authority, are we indebted

for the knowledge which we now possess concerning the influence of uric acid in the causation of disease; and many disordered conditions of the system which were hitherto but little understood are now attributed to this factor, while the therapeutic results founded upon this knowledge have been very gratifying. It is now generally recognized and understood that migraine is caused by the retention of this substance in the circulation, and that the solvent and eliminative mode of treatment, which aims at its removal, is the only one which promises or effects a really permanent cure.

We are indebted to Haig for the important discovery that two or three days prior to menstruation there is a marked diminution in the excretion of uric acid; that the latter substance is retained in the circulation until the second or third day of the flow, when it is excreted in greatly increased amount. This is what normally happens when the organs of elimination are healthy and active and perform this added duty properly, the only symptoms to indicate this temporary retention being a slight headache and depression of spirits at the beginning of the period. But if for any reason elimination is imperfect, as is so frequently the case, uric acid remains to accumulate, and we have all the disagreeable symptoms which are known to arise from its presence in the capillaries in excess.

It is evident that in order to avoid this troublesome condition of affairs, it is the duty of the physician when confronted with such a case to aid the patient's organs of elimination in removing this waste substance from the body at the time when such aid will prove most efficient—*i. e.*, just previous to and at the beginning of menstruation. In short, it would seem that the increased work demanded of the liver, kidneys and bowels at this interesting physiological period is often greater than can be satisfactorily performed, and, as a result of this partial failure, we meet with the many symptoms indicative of the presence in excess in the blood of waste toxins of the uric acid type.

To illustrate the value of the *solvent and eliminative* mode of treatment in these cases, and the marked therapeutic advantages it possesses over the older palliative means usually employed, we cite briefly here the clinical outlines of a case of menstrual "sick headache" recently treated by both methods; to wit:

Mrs. W., aged 32, a slender brunette of decided nervous temperament, married and mother of four children, had for several years complained that for three or four days prior to each monthly period, she began to suffer intense headache, which warned her of her approaching sickness, and which necessitated complete withdrawal from all household duties. She was obliged to retire to a darkened room and remain in bed, while absolute quiet reigned. At the beginning of the menstrual flow, gastric disturbances arose (vomiting, etc.), the head symptoms increased in virulence, the entire surface of the body became cold and the patient relapsed into a semi-comatose condition alarming to her friends as well as to her physician. Vigorous rubbing of the limbs and body was always resorted to as a necessary means to restore what appeared to be "suspended animation." Brandy and the usual restoratives were applied.

The patient would recover from one of these attacks or seizures, remain in a very weakened condition for a short time and suddenly relapse into another attack lasting for an hour or two. After remaining ill in this way for about a week, the patient, upon the gradual lessening of the menstrual flux, would cease to have further attacks, but still remain very weak for two or three days. Upon recovery, she went about her household duties as usual for a fortnight, only to repeat the same experience at the coming monthly period.

The treatment in this case had consisted in the taking of analgesics (antifebrin, etc.) at the onset of the headache, drugs of this character seeming to be her only refuge from the intense suffering at this time. After the commencement of her "spells" attention was directed solely toward restoring consciousness and feeling and an impeded circulation. It was evident, however that some rational course of treatment should be adapted between the attacks to prevent their recurrence, as the patient was extremely nervous and her general physical condition undermined. The chief symptoms of which she complained between times were constipation and occasional headaches.

After several years of this suffering, and many changes in the treatment at the hands of various physicians who had been consulted, the diagnosis of migraine was made and the solvent and eliminative mode of treatment was adopted. Instead of obtund-

ing the pain by means of drugs which paralyzed nature's efforts at eliminating toxic waste, it was decided to directly aid in these efforts by stimulating the natural processes of excretion and employing a solvent which would render the removal of the urates prompt and certain; for it was now believed that the serious symptoms in this case were entirely attributable to the retention of colloid urates in the circulation and consequent choking up of the capillaries.

A day or two prior to the time of the expected headache she was given, the first thing upon arising in the morning an hour before breakfast, a teaspoonful of thialon dissolved in a glassful of hot water, which dose was repeated at two-hourly intervals until four teaspoonfuls had been taken. This caused copious evacuation of the bowels and well-marked diuresis. For the ensuing three or four days only the single morning dose was taken. Though menstruation had now begun, yet the alarming "spell" which had always hitherto accompanied it had now degenerated into a slight headache and some vertigo. She passed through the dreaded week with nothing more serious.

The same plan of treatment was adopted at the next period, while occasional doses of the solvent were taken in the interim, sufficient to cause fairly free movement of the bowels. The result was even more satisfactory than before. A mild headache was the only symptom. This plan has since been followed regularly for the past three years, and during all that time the patient has failed to suffer one of her old attacks—passing through the monthly ordeal with comparative ease and comfort.

Accident Insurance in Berlin.—In the further working out of the industrial accident insurance in Germany, the edict has recently been passed that the family is entitled to an indemnity where the victim of an accident contracts a fatal infectious disease in the hospital to which he has been transported. The regulations assume that the danger of infection is greater in a hospital, and that the subject is less resistant on account of the traumatism, so that the latter is indirectly responsible for his death.—*Jour. A. M. A.*

EXTRACTS.

ERYSIPELAS, CAUSES AND TREATMENT.

BY. T. H. MANLEY, M.D.

What do we understand by erysipelas?

The ancients confounded erythema, eczema and a host of other cutaneous affections under this head, but for the past century or more its essential features have been only embraced in the definition of the term. Nevertheless there is by no means yet a common consensus of opinion as regards its etiology or pathology. It was thought well, in this connection, to briefly quote the definition of the malady as set forth by a few of our best-known authorities, to-wit, as follows:

Larry: Erysipelas depends on predisposition and local influences.

Campbell De Morgan: There is no doubt now but erysipelas begins in the blood, and manifests itself in altered local conditions with a general febrile reaction.

Abernethy: It is the state of the constitution which determines the character of the local disease. I'll be hanged if erysipelas is not always the result of a local and disordered state of the digestive organs.

Fergusson: Erysipelas is a treacherous, uncertain malady. It bears a close relation to the ordinary type of severe inflammation.

Bilroth: I freely admit my inability to prove that erysipelas is a specific poison. It may develop in the body from substances which have no relation to extrinsic influences.

Volkman: A local disturbance dependent upon the influence of a special poison.

Heckteon: Erysipelas is due to a wound implication, caused by the inoculation of the specific streptococcus erysipelas.

Senn: Erysipelas is always traumatic and dependent on the specific streptococcus.

Nothnagel: The disease is due to the introduction of the well-known organism into the skin or mucous membrane.

Grünwald: Erysipelas begins preferably in some insignificant abrasion of the surface, and is probably propagated more by fission fungi already in the body than by freshly imported germs.

Some of us who have seen considerable of this disease were impressed with a belief that pathological conditions of the system were a factor in the etiology of this malady. Let us see how far we are in accord with our more modern authorities on this point; and how far the doctrine of Fehleisen is supported, that only one specific coccus introduced through a wound can produce the disease,

Delafield and Prudden deny any specific properties to Fehleisen's microbe, and say: "The most common excitant cause of erysipelas is the streptococcus pyogenus; this was thought by Fehleisen to have a definite relationship to the disease, but it is now proven identical with the ordinary streptococcus." (Handbook of Pathology, p. 185.)

In the *Courier de Medicine* for September, 1902, we find the following: "Marmorek claims that all pathogenic streptococci are identical. He bases his claim on three common characteristics that he has found present in all the bacteria taken from forty-two diseases. These peculiarities were: The production in vivo of hemolysis in rabbit's blood, the inability to grow upon a filtrate of their own cultures, and the immunization of animals by Marmorek's anti-streptococcic serum. The immense amount of labor in trying to separate different species of streptococci is, therefore, wasted, and clinicians will be compelled to find some other excuse why the anti-streptococcic serum does not cure."

Fehleisen: Erysipelas is now indisputably proven to depend upon a scientific micro-organism, the streptococcus erysipelatis,

Crocker: Erysipelas may be produced by either the streptococcus or the staphylococcus; pus organisms are the *fons et origo mali*.

Warren: It is a specific disease dependent on trauma and a specific streptococcus.

Hajek: Erysipelas may be produced by any of the pyogenic organisms.

Cornil, Babes, and Sternberg: The morphology, growth and action of the streptococcus of erysipelas and suppuration are indistinguishable.

Weichselbaum: The streptococcus-erysipelatic cannot be discovered neither morphologically nor by cultures from the streptococcus of suppuration.

Unna: Erysipelas is one of the acute dermatoses.

Osler: Erysipelas is a widespread affection endemic in most instances and at certain seasons of the year. We are as yet ignorant of the atmospheric or telluric influences which favor its diffusion. The specific agent in the disease is the streptococcus.

Watson Cheyne: A contagious disease characterized by a peculiar spreading inflammation on the skin or mucous membrane. Its cause may be local or general.

Rosenbach: Erysipelas is a special inflammation of the skin, occurring with a complication of trauma.

In the etiology of the malady we note the most remarkably divergent views. For example, we find Senn asserting that "An infection atrium, there must be, for the existence of the specific germ . . . there is no such thing as spontaneous or idiopathic erysipelas." While an equally eminent authority, as we have seen, Osler, "The disease is endemic," moreover as we see there is a widespread divergence of opinion on the question of a specific streptococcus; such well-known pathologists as Eisberg, Bonnorne, Bordini, Passet and Simone deny specific organism. Jordan found that he could artificially produce erysipelas in a rabbit's ear, not only with any of the streptococci, but with the staphylococci, the pneumococcus and the bacteriumcoli.

Is erysipelas contagious—communicable from one individual to another, in the sense that various of the febrile exanthemata certainly are?

This might seem a preposterous question in these times of swift quarantine or sequestration of cases by the authorities. But boards of health, in some instances of late, have been only too prone to base their tenets too exclusively on bacteriology rather than more definite and rational lights of clinical medicine.

Stellwagon makes the unsupported assertion that "the disease is both infectious and contagious to a marked degree at times." Graves held to the doctrine of contagion; but the cases he cited to support his views, rather pointed to a type of infectious gangrene, and not erysipelas.

Emile Boix, while he held to the contagion of the malady as the cause observes that the condition, however, is the *sine que non* of all infection; the temperament is indispensable, for often

after a long sojourn of many cases of erysipelas in a ward with others, who have herpes, ulcers or wounds none are affected."

Von Ziemmsen observes: "The disease is an acute infection; the contagiousness of it is not great."

Blodget, of all modern writers, goes to absurd extremes, an unequivocal victim of the germ-mania. According to him: "The contagion is the simple, inevitable and indispensable cause of the disease; it is always necessary that there should be a door for the disease." Now, an endemic disease is not contagious, and as "contagion" is a disease acquired only through the respiratory or digestive canal, why an atrium, or even a little door? Thousands and tens of thousands knock, puncture or lacerate themselves daily, oblivious of erysipelatous infection; and among the large number of cases investigated by myself, since the "trauma" theory came into vogue, in no single instance has the patient been conscious of any description of injury; nor indeed, could I ever find the trace of a wound even with the aid of a magnifying lens.

Some allege that an erysipelas may spread from an individual in any stage of the disease to the healthy, nay, that it may seize on chronic sores or surgical wounds from one the subject to the malady. If this proposition could be established on irrefutable grounds, then the greatest possible precaution should be observed in isolating every case, that a household escape the contagion, that the inmates of a large institution may not be stricken down, and in hospitals, that surgical wounds may not become the seat of an erysipelatous infection.—*The Medical Examiner and Practitioner*.

Validity of License Tax on Healers.—The Supreme Court of Kansas holds valid, in the case of Steiner vs. Liggett, a city ordinance imposing a license tax of five dollars per day on magnetic, psychic or other healers, holding that there was statutory authority conferred on the city to require a license from anyone engaged in the calling or profession of magnetic, psychic and natural healing.—*Jour. A. M. A.*

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EDITORIAL.

LET THE GALLED JADE WINCE.

It would seem that a number of small-bore medical journals have had their bile stirred by the fact that they make little or no money, and that the large medical weeklies thrive and grow prosperous. A large proportion of these envious medical editors are particularly harassed mentally by the fact that the *Journal of the American Medical Association* has become such a pronounced success. It has forged to the front in a manner which has become a source of just pride to the members of the Association and an honor to its editor, who has so well directed its affairs and made of it what it is to-day. The JOURNAL is both pleased and gratified to see this, and certainly has no grounds for just criticism of the methods employed, as they are strictly business-like, and the results which have been attained certainly show that they have been successful. The further fact that Dr. Simmons, the managing editor, has been re-elected to his onerous position is a further proof that the methods he has

employed have been approved. He has been indefatigable in his efforts to increase the circulation of the *Journal* as well as of the membership of the Association, and in both of these he has been successful. He is not content with the amount of success which he has achieved, but is ever striving to do better. That he has made the *Journal* better than it had ever been is acknowledged by everyone. This is acknowledged by even his most active and bitter opponents. That upon which they base their opinions is a subject which shows how puerile their efforts are.

As an example of the dissatisfaction manifested by some editors, we quote from the Wisconsin *Medical Recorder*, which says: "The American medical profession is proud of its great society, the American Medical Association, but there are criticisms in the air which indicate a growing dissatisfaction which will weaken the society. The Association is really controlled and managed by a small coterie of men. Recently it appeared that they were managing the Association for their own personal benefit, and this is something which, if continued, will not be tolerated in this country. The lack of interest in some of the smaller societies is due to the fact that the few run them without allowing the majority a voice. The tendency of the American Medical Association is to make it subordinate to a great publishing business conducted for the benefit of the few." The fatuity of the assertions made in this editorial is so apparent that it would be loss of time to consider them separately and show the lack of logic which characterizes them. But one word. If a majority permits itself to be governed by a few it certainly should not complain. The majority can always crush the minority, and, if it does not do so, it has no one to blame but itself.

Dr. E. C. Register, in an editorial in the *Charlotte Medical Journal*, says: "As a member of the American Medical Association, I don't believe that it would be amiss or improper in any sense, or an injustice to anyone, to say that the *Journal of the American Medical Association* should not be the greatest advertising medium for proprietary medicines in this country.

As long as this policy of the *Journal* prevails evidences of prejudice against it will be in evidence. When they make the advertising of the proprietary medicines an insignificant fea-

ture of the *Journal*, or, better still, do away with it altogether, then, and not until then, will the name of the Association journal create a different murmur from that described by Dr. Culbertson, or cause the applause that it in many ways deserves. I believe that a policy of this kind would be a help to the *Journal's* great editor and his proficient assistants, and enable them to do better and more acceptable work."

We are sorry to see our esteemed cotemporary take this stand, when he is not only willing but anxious to publish all the proprietary medicine advertisements which he can get. We have a number, and we hope to get more. The manufacturers of these products are honorable business men, and the best medical journals publish their advertisements. And these journals are ethical and independent—more so, in fact, than a lot of inferior journals which cannot obtain the advertisements which they pretend to despise by assuming a purely ethical sort of stand. Of them, we can only say, "let the galled jade wince." A prosperous publication has no time or space to waste upon idle vituperation, to which no attention is paid by anyone but a few "soreheads." As the *Detroit Medical Journal* says very pertinently: "We fail to see why the growth of the Association journal should cripple independent journalism, so long as its advertising rates are maintained in proportion to its increasing circulation." The conclusion of the editorial in the same journal voices our sentiments and we heartily endorse it. It is as follows:

"As for ourselves, we shall publish an up-to-date practitioners' monthly, ethically clean always, so long as we have the support of the profession in our neck of the woods. We are striving to make it worthy a place on the table of every medical man who reads anything."

We hardly suppose that the Association will lose any members, or the *Journal* any subscribers or advertisers, as the result of the spleen of a few medical journals of the third class. All those of the first class will certainly support the *Journal* with their influence and good will.

BOOK REVIEWS.

Infectious Diseases. Their Etiology, Diagnosis and Treatment. By G. H. ROGER. Translated by M. S. GABRIEL, M.D. 8vo. pp. 874. Illustrated with Forty-three Engravings. [Philadelphia and New York: Lea Brothers & Co. 1903. Price, \$5.75 net.

The author of this treatise has had unusual opportunities by which he has profited much. A keen observer, he has not permitted any case to pass by unnoticed, and with practically unlimited clinical materials offered to him it will be readily understood that this, aided by his experimental work, easily led to the elaboration of a work which is universal in its scope and classic in its treatment. In the book before us there is hardly a disease which is not considered, and the manner in which this is done is thorough and chiefly concerned with principles. The author has very well succeeded in reconciling any apparent antagonism between experimental research and clinical observation and it is in this very feature that the great value of the work before us lies. The author is one who has been practically unknown in this country and in fact to all who have been readers of English books exclusively. It is by these that the present book will be hailed with delight as it will enable them to have an opportunity of reading one of the leading French writers upon the broad subject of infectious diseases. He has considered the entire range in a systematic manner and in one which is analytic as well as thorough. His book is written in such a manner that hardly any chapter can be taken alone and considered complete. All the chapters lead the one to the other and are introductory to and interdependent upon one another. Once begun the reading of the book will not be discontinued until its end has been reached.

With true philosophical directness Prof. Roger uses the simplest methods in unfolding his subject. After first studying the pathogenetic agents, he considers their distribution in nature, the conditions under which they attack man, and their mode of invasion. The effects of these upon the body and the matters upon them are taken into consideration. Diagnosis, prognosis, and treatment, both preventive and curative are treated at length, and it is this practical consideration of these subjects to which ample space is given which will recommend the book to those who are desirous of what they are pleased to call the practical. The fact that the author has given his personal attention to more than 10,000 patients, suffering with contagious diseases, during a period of five years in the Paris hospitals is sufficient evidence that these subjects receive proper consideration at his hands. His opportunities at the

Hôtel Dieu and the isolation wards of the hospital of Porte d'Aubervilliers, to which all cases of contagious disease occurring in Paris are sent, have been very great and he has very widely profited by them. He takes a keen delight in grappling with the problems which are presented to him and he is fully aware of the strength which he possesses and which he can bring to bear upon them. Some parts of the book deserve special attention. These are the influence of infection upon the various organs of the body. Among his more important researches upon which he dilates are those in experimental appendicitis; pseudotuberculosis; variola, and the vesicatory test. A particularly excellent chapter is that on the pathology of fevers and the défences of the organism against infections including a consideration of immunity.

Congenital infection and heredity is very well discussed in a chapter which is followed by a very thorough chapter on the diagnosis and prognosis of infectious diseases. The therapeutics of infectious diseases occupy nearly one-fourth of the work and it is here that the author has shown his advanced thought and given us the results of his enormous clinical experience. The concluding chapter is on the hygiene and prophylaxis of infectious diseases and in this chapter the author gives us the "ounce of prevention" which is of the greatest value to the individual and to the community. We could continue to call attention to the various valuable features of this treatise, but the best advice that we can give is to get a copy and read it.

The publishers have made a handsome volume of this work, which is done in their well known finished style. The medical profession certainly owes them its thanks for having made this excellent treatise available to them and the translator has unquestionably acquitted himself of his task in a very creditable manner.

Diseases of the Skin. An Outline of the Principles and Practice of Dermatology. By MALCOLM MORRIS. New Edition. 12mo. pp. 642. With Two Colored Plates and Fifty-eight Plain Figures. [Chicago: W. T. Keener & Co. 1903. Price, \$2.50 net.

This book is one which has been deservedly held in high esteem by dermatologists of this country and of Europe. The author has been a consistent worker in his chosen field and has done much original work, both theoretically and practically, in skin diseases. In fact, he has become so prominently identified in dermatology in England, that it may be safely said, that he occupies to-day the position of facile princeps among British dermatologists. Whilst the present work does not aspire to the dignity of a treatise on the subject with which it

deals, it is certainly full enough to prove satisfactory, even to those who limit their studies and practice to skin diseases. The author's idea has not been so much to write a large work, as a good one, and in this he has certainly succeeded. Whilst the book appears rather small at a casual glance, a careful examination of its contents will show that it is full and no essential point has been missed in its writing. We are much pleased with it, and more especially of the author's plan of abandoning the plan of so many, of devoting space to a description of the anatomy and histology of the skin, subjects which are better treated in other works, as well as the description of lesions and such other primary matters which should find no room in a book on the diseases of the integument.

That which is much more to the point is a consideration of principles. Thus the author introduces his subject with a chapter on the pathology of the skin, which is followed by a short consideration of the principles underlying classification.

The next chapter, which is a most valuable one, is on the principles of diagnosis, and he makes this very clear, more especially to the practitioner and student who are in much need of such instruction. Seven chapters are then given on affections of the skin dependent on nerve disorder, and the author has certainly shown a due appreciation of the importance of dermatoneuroses. After this we have a chapter on artificial eruptions, followed by two on eczema, which are well considered and give an excellent review of the author's knowledge and of the literature of this disease. After a chapter each on psoriasis and pityriasis come three on local inoculable diseases, including animal and vegetable parasites, and other micro-organisms. General inoculable diseases are considered in three chapters and are followed by diseases of skin-glands and epidermic appendages. New growths, benign and malignant, occupy each one chapter, and these are followed by the concluding one on malformations.

This book is sound in its teachings, in the main, although here and there some exceptions might be taken, as when he states that *plica polonica* is always due to filth and animal parasites, as the reviewer and others have seen cases in which the utmost cleanliness prevailed and which were, in reality, examples of neurodermal affections. The author thinks but little of general treatment in psoriasis, an opinion shared in by many and denied by as many more.

This little book is about as clean cut a text-book as any one could demand, and as a reliable guide to any physician we can heartily recommend it. In fact, we would advise all to possess a copy as they will often have occasion to consult its pages with profit to themselves and to their patients. We are more than pleased to see that the author has decided to write this

new edition, as it was called for, and he was thereby enabled to bring his book up to the date of the latest advances, which have been many during the past ten years.

The publishers have been very liberal in the matter of illustrations, although but two colored plates are given. The printing is excellent upon very good paper and the binding is of the finest. Another thing done by Messrs. Keene & Co., has been the reduction of the price to a figure which places the book within the reach of all. We can safely promise them a large sale of this excellent and meritorious work. O-D.

Progressive Medicine.—A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. Vol. IV. December, 1903. 8vo. pp. 444. Diseases of the Digestive Tract and Allied Organs: Liver, Pancreas and Peritoneum—Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities, and Orthopedics—Genito-Urinary Diseases—Diseases of the Kidneys—Physiology—Hygiene—Practical Therapeutic Referendum. Illustrated. [Philadelphia and New York: Lea Brothers & Co. Price, \$2.50 a volume; \$10.00 a year.

We once more have the pleasure of calling the attention of our readers to this, the concluding volume of *Progressive Medicine* for 1903. We have had occasion in a number of previous instances of pointing out the excellent features of this publication, and the number before us is certainly keeping up the high grade of excellence which has been established and kept up for several years past. We can point with unalloyed pride to this finished review of progress in medicine and surgery, and if any criticism were to be made of it, it is that the quality of the contents of each volume has been continually improving, and the rare discrimination made by the contributors, the masterly way in which they have reviewed literature, and the excellent editing, are all much above the average.

In the review of Diseases of the Digestive Tract and Allied Organs, Dr. John C. Hemmeter very properly gives the greatest prominence to diseases of the stomach, of the intestines and of the liver. Diseases of the pancreas receive more than ordinary attention, and very justly so, in view of the fact that our knowledge of these is daily becoming greater.

Dr. Joseph C. Bloodgood writes a most interesting chapter on anesthetics, fractures, dislocations, surgery of the extremities, and orthopedics. He devotes quite some attention to fractures, but the bulk of his contribution is on tumors, benign and malignant. This is well illustrated, and is for the most part composed of original observations of the author. He writes in a most interesting and instructive manner on the sub-

ject, so much so that anyone beginning to read it will not cease until he has finished it. In fact, this portion alone constitutes a well-written monograph of some sixty pages, well deserving of attentive reading and study. Following this Dr. William T. Belfield gives a review of genito-urinary diseases, the major part of which is devoted to diseases of the kidneys. This includes a very thorough review of the advances made in the department of renal diseases. Many interesting as well as useful and practical points are brought forward, and these cannot but be of the greatest use to the practitioner whose available means of information from periodical medical literature is necessarily limited.

Physiology is the subject of the report on progress of Dr. Albert P. Brubaker, who very justly devotes a large share of of his attention to the blood. Dr. Charles Harrington considers the advances in hygiene in a very thorough manner, albeit the report is not a very long one. In this tuberculosis and typhoid fever come in for a goodly share of attention. The Practical Therapeutic Referendum of Dr. H. R. M. Landis, which concludes the volume, is very well written, and is a carefully considered review of the subject. The author gives reliable information on the action of the newer therapeutic agents, and makes this part not only interesting, but of the highest practical value.

The publishers have made a handsome volume of this, and we anxiously look forward to the first volume of next year, which will no doubt be as replete with good reading matter as every one has been up to the present time.

A Compend of Pathology. General and Special Students' Manual in one volume. By ALFRED EDWARD THAYER, M.D. Second Edition, containing 131 illustrations. 12mo. pp. 711. [Philadelphia: P. Blakiston's Son & Co. 1903. Price, \$2.50 net.

We have been much pleased to receive this book as it is a vast improvement on the first edition which was published in two parts. This division of the work led many to buy one part and not obtain the other, a very foolish thing to do as they are mutually complementary and interdependent. As it now appears it is a complete manual and one which every undergraduate in medicine should appreciate. As we had occasion to remark on a former occasion the author was thoroughly fitted for this work in view of the fact that he has taught pathology for a number of years and is thoroughly fitted for the task. The book before us whilst not being compendious is very thorough and the discussion of most points has been very wisely eliminated. What is given is reliable and the utmost confidence may be reposed in what the author

states. It is all set forth in such a plain way that any medical student can readily understand it. Not only this, but many a practitioner will find it a handy and useful book for reference, and teachers can make use of it as a guide to follow in giving their lectures. We could continue to point out its qualities but will first call attention to its contents.

The book is divided into two general parts dealing respectively with general and with special pathology. General Pathology is divided into chapters in which are considered disease in general, disorders of development teratology, disordered blood supply, disorders of metabolism both constitutional and local, inflammation and repair, neoplasms, animal parasites, vegetable parasites, infectious diseases, and methods, the part terminating with a chapter containing tables and statistics. In Special Pathology is included the circulatory system, the respiratory system, ductless glands, alimentary canal, alimentary glands, urinary system, reproductive system, nervous system, locomotory system, and artaneous system. The last chapter of this part deals with death by violence and poison.

A fair idea of the scope of this book may be formed from the cursory review of its contents given above. The author has permitted nothing to escape him and, with the excellent illustrations and plates used throughout the text, he has certainly produced a book which is vastly superior to the ordinary compends which are placed on the market. He has succeeded in producing a handy reference book such as is needed by both physicians and students alike. That the book will be a success goes without saying.

The publishers have produced it in a convenient size and the author has so thoroughly indexed it that a mere glance will convince any one of its usefulness and value. It is well printed in clear legible type and the illustrations in many instances are colored. A handsome edition has been produced bound in flexible leather, with gilt edges, and rounded corners. This would certainly make a handsome gift to present to a medical friend and we are certain he would deeply appreciate it. The publishers are certainly to be congratulated on publishing such a good book in such a handsome manner.

Precis d' Electricité Medicale. Par E. CASTEX. 12mo. pages 672. Avec 208 Figures. [Paris: F. R. de Rudeval. 4, rue Antoine Dubois. 1903. Prix, 8 francs.

MANUAL OF MEDICAL ELECTRICITY. By E. CASTEX. 12mo. pp. 672. With 208 Illustrations. [Paris: F. R. de Rudeval. 4, rue Antoine Dubois. 1903. Price, 8 francs.

This is a most thorough manual on the subject with which it deals, and the author has shown himself a master of the sub-

ject which he treats in a complete manner in all its phases. Beginning gradually with a clear exposition of the principals of electricity, he leads up to a thorough consideration of its practical applications in medicine. He demonstrates in a thorough manner his familiarity with his subject, something which we would certainly be led to expect in view of the fact that he has not only taught this at Rennes, but from the further fact that he is the chief of the service of electrotherapy and of radiography at the Hôtel Dieu of Paris, in fact, his capabilities as a physician have long since been demonstrated by him, and the work which he offers us is just the kind that we would expect of him, thorough and easily understood. Besides this the simplicity of the presentation of the subject appeals to his reader and large amount of information which he gives in a comparatively small space still further helps to increase the good impression which it makes. It is a manual which is destined to make its mark and to become popular with students and practitioners alike.

In order that a clearer conception of this manual may be formed, it may be stated that Book I. is devoted to fundamental principles, the galvanic current, faradisation and galvanofaradisation, the alternating sinusoidal current, currents of high frequency, static electricity, and thermic galvanocaustics. Book II. deals with electrophysiology which includes galvanisation, faradisation, voltaisation, Franklinization, electricity in microbiology, the dangers of electric currents, and the production of electricity by living beings. Book III. is a most important one and it deals with electro-diagnosis. Book IV. will be regarded by the practitioner of medicine as the most valuable in this manual in view of the fact that it deals with electrotherapeutics. In this part the author divides the subject matter into nine chapters each, one of which deals with the electrotherapeutics of the diseases of an organ or system of tissues. Book V. is on Radiology and, in this, the latest advances are mentioned and the author gives us the results of his large and varied experience in this department of electrotherapeutics as well as diagnosis. Book VI. which is the concluding one whilst not strictly appertaining to medical electricity is so closely allied to it as to deserve a place in such a thorough and well written manual. It is on phototherapy which, through the efforts of Finsen, bids fair to possess much importance.

We could keep on calling attention to the various good points of this manual but we have said enough of it to give the reader a fair idea of the scope as well as thoroughness of the book which is certainly fully deserving of a translation, and we have little doubt that before long, there will appear editions of it in other languages besides French. It is certainly deserving of it, and under proper editorial translations it can be made a book which would hold its own with any in its class.

Blood-Pressure in Surgery. An Experimental and Clinical Research. The Cartwright Prize Essay for 1903. By GEORGE W. CRILE, A.M., M.D., 8vo. pp. 422. Illustrated. [Philadelphia and London: J. B. Lippincott Co. 1903.]

The author of this monograph has again demonstrated his superior ability for original research in the line which he has chosen for his field of investigation, and the value of his work may be judged from the fact that he has won the Cartwright prize of the Alumni Association of the College of Physicians and Surgeons of New York. In all the experiments which are recorded, and which amount to 251, the animals were completely anesthetized, and but one recovery experiment was made. This essay is very thoroughly and methodically written. The methods of investigation and annotation are given, and followed by the protocols. After this we are given a summary of experimental data, which are in themselves of the highest interest.

The Clinical Observations on Blood-Pressure are elaborate and recorded with the greatest care, there being many physiographic tracing of the highest interest taken. All that has been mentioned is really preliminary to the subject proper. The author enters into *medies res* when he enters upon a study of changes in the blood-pressure during surgical operations. These latter embrace operations on the head, in the mouth, on the neck, on the thorax, on the abdomen; on the genito-urinary system, on the testicles, and on the spinal column; herniotomy, upon the extremities, and operations under cocaine. Then follows a summary, the argument, and a well-considered conclusion on collapse, the essay being closed with a final summary. Among the conclusions given in the final summary are: Surgical shock is an exhaustion of the vasomotor centres; in this cardiac stimulants have but a limited range of possible usefulness, and may be injurious. Saline infusion has a limited range of usefulness in shock, and therapeutic doses of strychnine are inert, whilst physiologic doses are dangerous or fatal. On the other hand collapse is due to a suspension of the function of the cardiac or of the vasomotor mechanism, or to hemorrhage. In this stimulants may be useful because the centres are not exhausted. Saline infusion may be effective in collapse, but the blood tolerates but a limited dilution with saline solution. The author also mentions methods for the resuscitation of apparently dead animals, the resuscitation lasting for some hours.

The whole essay is one deserving of close study by students of physiology, experimental investigation, and surgeons. They will find in it much food for serious thought and many data of the highest value in their work. We can recommend this work to students of the higher forms of biological investigation.

Essai Sur la Psycho-Physiologie des Monstres Humains. Un Anencephale. Un Xiphopage. Par N. VASCHIDE et CL. VURPAS. 12mo. Pages 294. Illustré. [Paris: F. R. de Rudeval, 4 rue Antoine Dubois, 1903. Prix, 5 francs.

AN ESSAY ON THE PSYCHO-PHYSIOLOGY OF HUMAN MONSTROSITIES. An Anencephalers. A Xiphopagus. By N. VASCHIDE and CL. VURPAS. 12mo. pp. 294. Illustrated. [Paris: F. R. de Rudeval, 4 rue Antoine Dubois, 1903. Price, 5 francs.

Every teratologist will be attracted to this monograph and the subject with which it deals, as well as the methods employed by the authors, will awaken more than ordinary interest. The examination of an anencephalus during its whole life, nearly two days, permitted the authors the elucidation of certain physiologic points, and to raise if not solve certain biologic problems. A minute study of the retina was made and demonstrated the existence and normal condition of that membrane. This observation of an anencephalus studied and methodically examined and in a complete manner for nearly two days is the first case reported in man and, on this account, it possesses particular interest.

In the second part of this study the authors report the case of the Chinese xiphopagus who was exhibited in 1902 by Barnum & Bailey. The biologic and mental states of the monstrosity are minutely studied by means of both the graphic method and of the tests employed in experimental psychology. Every circumstance in connection with them is noted. Some of the problems in connection with similar monstrosities receive here a clear and complete solution. Following this are given descriptions of the most interesting known and reported double monstrosities, most of which are borrowed from the remarkable work of Geoffroy St. Hilaire. In the last chapter is reported the history of the second xiphopagus exhibited by Barnum, the hindoo Radica Doodica, successfully operated on by Dr. Doyen. The operation is described in all its details and physiologic details are also given observed during life, during the operation, and after autopsy.

The appendix contains much of interest on double monstrosities, their death and other data which are for the most part derived from the classic work of Geoffroy de St. Hilaire. Throughout, the book before us breathes of a deep scientific spirit and is evidence of the serious work which has been done by its authors. The illustrations which are given are numerous and not only interesting but demonstrative. The book is a valuable one and should be in the library of every one interested in teratology on monstrosities.

Clinical Treatise on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By PROF. DR. CARL VON

NOORDEN Part IV. The Acid Intoxications. By Prof. Dr. Carl Von Noorden and Dr. Mohr. 8vo. pp. 80. [New York: E. B. Treat & Co. 1903. Price, 50 cents.

This little monograph is devoted to acid auto-intoxication, which was at first denied by the Germans, and in the rejection of which they are the most industrious at the present time. The author has examined more particularly into the acid forms of self-poisoning, as they are among the gravest forms of auto-intoxications. As among those of the most practical importance he includes those special perversions of metabolism resulting in the excessive production of β -oxybutyric acid, diacetic acid and acetone, which are of so much danger to diabetics, and which at times complicate the diseases seriously. The author considers the subject in his usual excellent manner, considering the question of where the acetone bodies are formed, their source, and pathological non-diabetic acetonurias. Diabetic Acetosis is considered quite thoroughly, and in connection with it, the effect of fasting, and the acetonuria of diabetics. He concludes the monograph with therapeutic considerations which are very valuable. It may be stated that this number of von Noorden's series is of particular value from a clinical standpoint; and is to be ranked among the best so far issued.

A New Surgical Treatise on Diseases of the Prostate Gland and Adnexa. By GEORGE WHITFIELD OVERALL, A.B. M.D. 12mo. pp. 209-x. [Chicago: Rowe Publishing Co., 1312-34 East Washington St. 1903.

The author of this little monograph has certainly struck the keynote of what we are to regard rational medicine. He is opposed, and justly too, to the modern idea of operating upon every case in which the prostate is involved. He shows how these operations may be avoided, and successfully, by medicinal treatment, and, when this fails, by electrotherapeutic measures, which are but too little understood by the profession in general. The book is written in a conservative manner throughout, and the author points out the few conditions in which operative interference is an absolute necessity. In order to illustrate his points more clearly and render himself better understood, he gives the clinical histories of thirty-five cases, each one of which is instructive and interesting. In an appendix of some thirty pages he deals with electro-physics, electrolysis and cataphoresis. This is of great help to the reader, and aids in placing the treating which the author advocates on a rational basis. The book is well printed on good paper and illustrated with twenty-six figures. It should be in the hands of everyone who practices or intends to practice in the line of genito-urinary diseases.

The Skin. Its Care and Treatment, according to the Michigan System. Teaching every Detail of this Important Work in a Simple, Concise and Practical Manner. 12mo. pp. 236. Illustrated. [Chicago: McIntosh Battery and Optical Co. 1903.

This little book, at first glance, might strike the careless reader as being simply a guide for the so-called "beauty doctors." It is in reality a well-considered little treatise on the proper manner of taking care of the skin and hair. All the details of the work necessary are entered into fully, and the directions are both excellent and rational. As the author states, dermatologists are too much engrossed with the study and treatment of the more serious skin diseases to pay any attention to pure cosmetics, and the profession in general has no time to devote to patients personally for this purpose. It is for this reason that they should encourage those who have made a serious study of this subject, and should furthermore recommend their patients who desire such treatment to those whom they know to be reliable. We would recommend practitioners to obtain this little book, as they will learn from it much to their advantage and to that of their patients.

QUIZ COMPEND NO. 19.

Compend of Diseases of the Ear, Nose and Throat. By JOHN JOHNSON KYLE, B.S., M.D. 12mo. pp. 280. Eighty-five Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1903. Price, 80 cents net.

This latest issue of Quiz Compend is a most excellent one. The author has presented us with an excellent condensation of the subject, not only of the greatest value to the undergraduate, but equally useful to the practitioner who is not a specialist in the branches whereof it treats. The book is well illustrated, complete and well written. It is a well-considered and well-balanced little book, and is certain to become popular directly it is known. In fact, it is a fit companion work for the other volumes of the well-known series of Quiz Compend. Like all of them, it is thoroughly up to date, and gives the latest improvements and advances in the treatment and pathology of diseases of the ear, nose and throat. We only regret that this little book appeared so late in the year, as its earlier appearance would have ensured a much larger sale for it. However, there is no doubt that its intrinsic merits are such that it will meet with the popularity which it so richly deserves.

The Physician's Visiting List (Lindsay & Blakiston's) for 1904. Fifty-third Year of its Publication. [Philadelphia: P. Blakiston's Son & Co. Price, \$1.00 net.

The Visiting List before us is so well known and so popular with the medical profession that it certainly needs no introduction at our hands. It is compact, well constructed, and generally superior. The present issue is the best one which has so far appeared, and is a credit to its publishers. The one before us is made for 25 patients a week, and costs but \$1.00. It is dated for every day of the year. Other editions are for more patients, and some again are on the perpetual plan and may be begun any day. We can heartily commend this visiting list as being both useful, handy and practical.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Précis d'Electricité Médicale. Par E. Castex. 12mo. pages 672. Avec 208 Figures. [Paris: F. R. de Rudeval. 4, rue Antoine Dubois, 1903. Prix, 8 francs.

The Skin. Its Care and Treatment. According to the Michaud System. 12mo. pp. 236. Illustrated. [Chicago: McIntosh Battery & Optical Company, 1903.

The Physician's Visiting List (Lindsay & Blakiston's) for 1904. Fifty-third year of its publication. [Philadelphia: P. Blakiston's Son & Co. Price, \$1.00 net.

Essai Sur la Psycho-Physiologie des Monstros Humains. Un Anencéphale. Un Xiphopage. Par N. Vaschide et Cl. Vurpas. 12mo. pages 294. Illustré. [Paris: F. R. de Rudeval, 4 rue Antoine Dubois, 1903. Prix, 5 francs.

A Non-Surgical Treatise on Diseases of the Prostate Gland and Adnexa. By George Whitfield Overall, A. B., M. D. 12mo. pp. 207-x. [Chicago: Rowe Publishing Co., 1312-34 East Washington St., 1903.

Blood Pressure in Surgery. An Experimental and Clinical Research. The Cartwright Prize Essay for 1903. By George W. Crile, A.M., M.D. 8vo. pp. 422. Illustrated. [Philadelphia and London: J. B. Lippincott Company, 1903.

A Compend of Pathology General and Special. A Students' Manual in one volume. By Alfred Edward Thayer, M. D.

Second edition, containing 131 Illustrations. 12mo, pp. 711. [Philadelphia: P. Blakiston's Son & Co., 1903. Price, \$2.50 net.

Diseases of the Skin. An outline of the Principles and Practice of Dermatology. By Malcolm Morris. New edition. 12mo. pp. 642, with 2 colored plates and 58 plain figures. [Chicago: W. T. Keener & Co., 1903. Price, \$2.50 net.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden. Part IV. The Acid Intoxications. By Prof. Dr. Carl von Noorden and Dr. Mohr. 8vo. pp. 80. [New York: E. B. Treat & Company, 1903. Price, 50 cents.

Infectious Diseases. Their Etiology, Diagnosis and Treatment. By G. H. Roger. Translated by M. S. Gabriel, M. D. 8vo. pp. 874. Illustrated with forty-three engravings. [Philadelphia and New York. Lea Brothers & Co., 1903. Price, \$5.75 net.

QUIZ COMPENDS No. 19.

Compend of Diseases of the Ear, Nose and Throat. By John Johnson Kyle, B.S., M.D. 12mo. pp. 280. 85 Illustrations. [Philadelphia: P. Blakiston's Son & Co., 1903. Price, 80 cents net.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by H. R. M. Landis, M.D. Vol. IV. December, 1903. 8vo. pp. 444. Diseases of Digestive Tract and Allied Organs: Liver, Pancreas and Peritoneum, Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities and Orthopedics, Genito-Urinary Diseases, Diseases of the Kidneys, Physiology, Hygiene, Practical Therapeutic Referendum. Illustrated. [Philadelphia and New York: Lea Brothers & Co., 1903. Price, \$2.50 a volume; \$10.00 a year.

Messrs. Lea Brothers & Co. announce that, with the new year, the annual subscription price of "*Progressive Medicine*" will be reduced from \$10.00 to \$6.00, and that for convenience in carriage it will divest itself of the heavy cloth binding. The volumes will each contain 300 pages, abundantly illustrated, and the work will continue to be issued under the same editorial management and with the same brilliant corps of contributors which have made it the indispensable assistant to the active, busy practitioner. The series of these volumes forms annually a practical treatise covering the entire domain of medicine and surgery.

The New Antikamnia Calendar. The Antikamnia Chemical Co., has again done itself proud in issuing its calendar for 1904. It is a veritable work of art. On one side we are given a calendar for 1904 and on the other the picture of a beautiful Sister done in colors in the highest style of art. The title is "Confidence" which everybody has in Antikamnia that has ever used it. We were treated to a pleasant surprise in receiving this work of art and we are certain that all physicians who obtain a copy of it will regard it as a welcome addition to their art treasures. Those desirous of obtaining a copy can do so by sending ten cents to the Antikamnia Chemical Co., who will be pleased to furnish same.

MELANGE.

The St. Louis Meeting in 1904.—In fixing upon St. Louis as the location of the thirteenth annual meeting of the Association of Military Surgeons of the United States, the Executive Council has complied with the clearly manifest wish of the membership. The Louisiana Purchase Exposition will cause a universal reduction in transportation, and will in itself be an attraction which will influence the attendance of a large number of visitors. The middle of October, selected as the date of the meeting, is the period when the Exposition will be at its best, and when the climate of St. Louis is always the most agreeable. The sessions of the meeting are to be held in excellent apartments, furnished by the Exposition authorities upon the grounds, and attractive social headquarters will also be furnished within the gates of the Fair. The scientific work will be confined to the six mornings of the week fixed upon, the remainder of each day being left open for sight seeing, securing a rare combination which cannot but insure to the great satisfaction of those attending the meeting.—*Jour. Ass. Military Surgeons of the U. S.*

For a Medical Press Exhibit at the St. Louis World's Fair.—

It is to be regretted, as a matter of history and of criticism, that no International Exposition has ever had an exhibit of the medical and scientific publications of America as a collective and comprehensive exhibit. A few scattered displays made by individual publishers, or included in the general newspaper exhibits, were all that served to represent the American Medical Press either at Chicago or at Paris. It is true that at Buffalo a commendable effort was put forth by the department of press and publicity to keep on file the current issues of American publications. This plan was only partially successful.

Mr. Walter Williams, through the Missouri Board of Commissioners, is preparing an exhibit of journalism, but this will embrace only the publications of this State.

The undersigned has secured adequate space at St. Louis, in the palace of Liberal Arts, with a view of making a display of American Medical publications which shall be commensurate with the importance of this class of work, and earnestly solicits the co-operation of editors and publishers of medical journals. Decisive action must be taken at once. The expense necessary to make this exhibit will be nominal. There is no charge for space, and the writer believes that the department of publicity will assist us in maintaining an up-to-date and comprehensive exhibit, where files of current issues of every medical journal in the land may be found during the progress of the great Fair. Full information will be furnished later, and all medical journalists are urged to communicate *at once* with the undersigned, with a view to united action and early endeavor, so that additional space may be secured, if necessary, to accommodate all who desire to join the bureau. CHAS. WOOD FASSETT.

—*Medical Herald.*

The First Case of Appendicitis.—Dr. Howard A. Kelly of Baltimore, according to the *British Medical Journal* of July 4, has greatly delighted our French brethren by giving the credit of the first clear description of a case of appendicitis to a French surgeon. Speaking in French to the Société de Chirurgie, he said that in the *Journal de Médecine, de Chirurgie et*

de Pharmacie, Mestivier in 1759 reported the following case: A man, aged 45, presented himself at the St. André Hospital, Bordeaux, for treatment of a tumor situated near the umbilical region on the right side. The surgeon made an incision, giving issue to about a pint of pus of bad quality. The patient died. At the necropsy the cecum presented nothing extraordinary. The same could not be said as regards the vermiform appendix. There was found a large pin, all crusted over and eroded. It may be inferred that this pin had been long imprisoned in the appendix, and had there set up the symptoms of the disease and caused death. A few years later, in 1776, a medical student, named Joubert Lamotte, published a report of a necropsy in a person who had died of tympanites. The author, after describing the symptoms of the illness, states that he had found in the vermiform appendix a foreign body as it were petrified, and in the cecum entire cherries. The necropsy having been made in September, the cherry season was long past. The cherries had, therefore, remained in the cecum, and the petrified body is the first example of fecal calculus. The first case in the nineteenth century was published by Jadelot in 1808. In 1812 a case was published in England, and in 1813 another in France by Wegeler. In 1824 appeared a paper by Louyer-Villermay, entitled "Observations to Serve for the History of Inflammations of the Cecal Appendix." In this paper are related two typical cases, in each with a necropsy. It is unquestionable, therefore, says Dr. Kelly, that to Louyer-Villermay belongs the honor of having been the first to point out the importance of appendicular inflammation. Three years later, in 1827, Melier published a memoir on the subject, based on a case of his own, and a study of the two others related by Louyer-Villermay, and on two new ones. He described the lesions in the appendix, and had even a notion of the possibility of surgical intervention. Melier had, unfortunately, no official position, and apparently little confidence in himself. His ideas did not find favor with Dupuytren, then the sovereign authority in French surgery; otherwise one of the most brilliant triumphs of modern surgery might have been achieved seventy years earlier than it was. This is one of the many examples of the disastrous influence of the superior person on the progress of science.—*Jour. A. M. A.*

MISCELLANEOUS NOTES.

Some Opinions of Dermapurine.—I am using the samples you sent me with the happiest results.

N. A. McCOY, M.D.,
Jackson, Tenn.

Pueblo, Colo., Dec. 29, 1900.

DERMA REMEDY CO.,
St. Louis, Mo.

Gentlemen:—Some months ago you sent me a bottle of Dermapurine and a cake of Dermapurine Soap. I used the samples in a case of psoriasis and in a case of dandruff with great success. I consider Dermapurine a fine remedy.

I am, yours truly,
C. B. CAHUSAC, M.D.

We shall continue our good words, as your Dermapurine Soap pleases us more than any other we have have tried, and we have tried many.

Success to you.
Vigorously yours,
EDWARD B. WARMAN.

—Editor of the Health Department of the *Ladies' Home Journal* ; Author of "*Scientific Physical Training*," "*The Voice*," "*Philosophy of Expression*," etc.

Pointers on Antiphlogistine.—"For therapeutic efficiency in rapid resolution of the products of inflammation, Antiphlogistine is unexcelled."

"Expectation becomes realization in all cases of localized inflammation where Antiphlogistine is applied."

"Extension of the septic products along the vascular highways is prevented by the use of Antiphlogistine."

Rheumatic Dysmenorrhea.—

℞ Cimicifugæ 2 ozs.
Tr. Stramonii ½ oz.
Tr. Tongaline q. s. ad. 4 ozs.

M. Sig. A teaspoonful in water at meal times.

Sanmetto in Frequent Incontinence in the Aged, in Enuresis Nocturna in Children, and in Pre-Senility.—I have had good results from the use of Sanmetto in nocturnal enuresis of children; have also prescribed it in cases of frequent micturition in old people with marked benefit; also find it beneficial in pre-senility. I think it is a good medicine in all cases where anything of its nature is indicated.

S. W. BADGER, M.D.

Athens, Pa.

Improvement from Celerina After Removal of Alcohol.

—After the removal of alcohol, Celerina, given in doses of from one-half to one ounce every four hours, is speedily followed by the most characteristic symptoms of improvement.

The Treatment of Nasal Catarrh.—Mannon (*Cincinnati Lancet-Clinic*) finds no danger whatever from the use of the nasal douche, provided ordinary care is taken and a proper solution is employed. The charge that post-nasal douching is prone to excite inflammation of the middle ear he does not find sustained. All leading specialists employ this method of treatment in the posterior as well as the anterior nares with equally good results. The doctor has had chronic nasal catarrh of many months' duration yield to douching when heroically employed. Listerine, to which a small quantity of bicarbonate of soda has been added, is his main stand-by. If hemorrhage is a controlling feature, he uses instead a saturated solution of tannic acid to each ounce of which ten grains of carbolic acid has been added. When the tendency to bleed ceases he returns to the listerine solution. Treated in this way, the most pronounced cases yield in three or four weeks, and are not prolonged by complications or sequelæ.

Rheumatic Pain and Fever.—In *The Medical and Surgical Bulletin* we find the following, under the caption of "Acute Articular Rheumatism," by Dr. E. G. Evans: "Salol is the best intestinal antiseptic we have, and Antikamnia as a pain reliever is, without doubt, unsurpassed; therefore the combination of these two remedies in the form of the well-known 'Antikamnia and Salol Tablets' affords us the ideal medicament for pain and fever in rheumatic conditions. Patients appreciate the fact that when administering Antikamnia you relieve the pain without giving them morphia, while the Salol acts as a germicide and antiseptic, tending to ameliorate generally the symptoms of the disease. Antikamnia and Salol Tablets (each tablet contains $2\frac{1}{2}$ grs. Antikamnia and $2\frac{1}{2}$ grs. Salol) are best given in doses of two tablets every three hours until ten or twelve tablets are taken during twenty-four hours. The patient's bowels must be kept open, and the diet should be light. Alcohol is contra-indicated, and water should be freely and frequently given. The bed covering should not be too heavy, but warm. Cold water packs, as well as hot fomentations, are very beneficial."

Glyco-Heroin (Smith) Compared with Codeine and Morphine.—Aside from the after effects of morphine, such as nausea, general lassitude, vomiting and vertigo, it has the disadvantage that the patient becomes readily addicted to it and chronic morphinomania occurs, especially in neurotic persons.

Codeine in its physiologic action resembles narcotine, though the narcotic stage is not so much pronounced. When administered in small doses intestinal peristalsis is promoted, while in large doses it produces diarrhea in consequence of complete relaxation of the intestinal muscles, owing to paralysis of the nerve centers governing the intestines.

The sedative action of codeine is unreliable.

Expectoration is not promoted by morphine or codeine, while Glyco-Heroin (Smith) acts as a stimulant to the respiratory center, and stagnation of the secretions is excluded.

Comparative doses of Glyco-Heroin (Smith) and codeine show the latter to produce nausea, vomiting and vertigo, while these symptoms are absent during the administration of Glyco-Heroin (Smith).

Unlike morphine preparations, Glyco-Heroin (Smith) does not constipate.

Glyco-Heroin (Smith) as a respiratory sedative is decidedly superior to the preparations of opium, morphine, codeine and other narcotics, as it is devoid of the toxic or depressing effects which characterize the latter when given in doses sufficient to reduce the reflex irritability of the bronchial, tracheal and laryngeal mucous membranes.

ST. LOUIS Medical and Surgical Journal.

Whole No. 758.

VOLUME LXXXVI.—FEBRUARY, 1904.—No. 2.

ORIGINAL COMMUNICATIONS.

WINDS AND LUNG DISEASES.

BY GEO. B. H. SWAYZE, M.D., PHILADELPHIA, PA.

A recent number of the MEDICAL AND SURGICAL JOURNAL quotes a page of very important remarks credited to the *Medical Press and Circular*, relative to the deleterious effects of winds on phthisis. Certain paragraphs merit renewed observation here, as preliminary to the brief analysis that the present writer repeatedly foreshadowed in various papers on causes of influenza and lung diseases, printed more than ten years ago. Excerpts from *Medical Press and Circular* article: "There is a curious conflict of opinion in respect to the influence of high winds in the causation of pulmonary tuberculosis. Great and persistent movements of air determine a comparatively high rate of mortality from phthisis. It would be difficult to deny prevalence of bronchial catarrh among inhabitants exposed to cold, damp winds. Morbidity does not appear to be determined by the direction of the winds, all great movements of air having approximately the same deleterious effects. Inhabitants of a windy district are tempted to keep doors and windows closed, creating a state of things strictly comparable to that met with in cities as result of overcrowding. The deprivation of fresh air determines the lethal proclivity. In winter the cost of heating leads to pernicious economies, entailing a dearth of fresh air."

The inference linked in these quotations as cause of increased fatality by phthisis is correct as far as it extends. But it stops significantly short of the actual lethal element that

assaults the vitality during the prevalence of high winds, and also attending all other atmospheric conditions that interrupt generous fresh air ventilation of the household. If bacilli were the active cause of lung disease: instead of constituting the natural scavengers developed by morbid material or débris of disease already induced by the assaults of toxic breathing-air in the lungs, winds alone could not operate as riotous destructives, not only in the path of phthisis, but specially also in sudden overthrow of so many lives by pneumonia, influenza, diphtheria and nervous prostration.

Philadelphia has had her rigid share of severe and windy weather during the late "cold wave." For the week ending Jan. 2d inst., the Bureau of Health reports deaths from pneumonia, 95; from bronchitis, 14; from consumption of lungs, 62. As correlative data I also quote from Philadelphia Health Bureau report, made during a rude, blustery month, week ending March 14, 1903: Died from inflammation of the lungs, 102; of bronchi, 11; of consumption, 57. Now, by contrast of fatal cases in close house air in rude winter and open house and work-day air in summer weather, I quote a convenient Health Bureau report for week ending July 29th: Died from inflammation of lungs, 23; of bronchi, 3; of consumption, 51. This showing gives markedly less difference in the fatality of phthisis in a season of open, sanitary house air and season of closed vitiated house air. But the fact doubtless remains that the actual take-off of the chronic consumptives and sundry cases of acute disease is more liable during the re-buffs and vital depression of windy weather for reasons that I now submit.

I have repeatedly noticed that after two or three days of unusually cold and blustery weather, crape comes numerously out at the doors to indicate as many concurrent deaths inside. If we turn critical attention to the inside house or business place conditions that impair health and hasten death, we may find there quite universally a specially toxic despoiler of the respiratory tissues, more or less active, and constantly dethroning vitality. Because of certain untoward circumstances blindly overlooked, groups of severe cases may be developed in a day or night, and scores of deaths may ensue in a week or fortnight. By the way, at the puzzle of these experiences, the stupid

quibbles about contagiousness of la grippe and lung diseases are started to pacify deluded conscience. But above, beneath, surrounding all other incidental agencies of diseases, there pervades the tangible fact that the gaseous carbonic oxide poison from burning fuels is evolved daily and nightly in almost every house inhabitable the world over. This gas, to varying extent, escapes into the breathing air of the home and business place, wherever situated. It is poured also into the outdoor air from chimney tops, factory and furnace smoke stacks, locomotives, that contaminate the breathing-air continually about them. These toxic fire gases are evolved alike from anthracite and bituminous coals, from coke, kerosene oil, illuminating gas, or any other fuel used, with the possible exception of electricity. When this carbonic or fuel gas is inhaled with the breathing-air of any place. It disorders the breathing surfaces, intercepts proper oxygenation of the blood corpuscles as they are pumped through the lungs, interferes with normal elimination of venous impurities, hence increases the toxic débris of the system, impairs normal nutrition of all the organs, prostrates nerve functions, arrests heart power. With impoverished and vitiated blood current, there is no stamina to health. Neurasthenias or neuroses and inflammations and presently lung disintegrations are bound to capture the victim.

Besides the ordinary fuel gases that are conducted into sleeping rooms, the burning of coal oil and common gas stoves, and the use of gaslights and lamps during the nights in sick rooms that are not ventilated to the out-doors, but add suffering and severity to the cases, and make liability to death more certain. In many houses the smoke and fuel gases channels or drafts are choked by obstructing obstacles, and the carbonic poison proportionately backed directly into the breathing-air of that house—possibly with one or more sick there or dying for the relief of fresh, pure air only. Drugs, in those numerous cases, never equal the efficiency of common sense by the medical attendant, who is supposed to comprehend the situation. A misplaced damper, a closed room haunted with poisoned air, a windy night, may and often do defeat the purpose of a doctor. I speak positively and earnestly on these points, because of their practical value and momentous importance in curing disease and saving lives in all critical cases,

where every defense to failing vitality needs be promptly availed of. I speak from practical knowledge, not from any mere theory.

This brings me to the winds. High winds forcibly cut their force and pressure across the open tops of chimneys, choking backward their draft, even often pushing downward in the smoke or fuel-gas channels until smoke (if there is any) and ash and combustion gases are pressed directly into the house air of homes and business places by what are known as "down drafts." But damp, heavy, cloudy, muggy weather, even without winds, interferes with chimney drafts, fire drafts, and produces a similar backing of the carbonic gases from burning fuels, but this more steady and less visibly. Country houses, standing alone, afford the winds greater play from every side; hence the direction of the winds makes no difference in the deleterious results. The air inside the house is poisoned the same, and the injurious gases are usually boxed into the local breathing-air by doors and windows being mistakenly kept closed. With their housed-in toxemias, deoxygenation, nerve depressants, throat and chest irritations and inflammations, weakening hearts, country homes and business places contribute to the same tragedies that haunt harrassed towns and crowded cities. Winds in themselves do not increase consumption, except through their effect in backing the toxic fuel gases into the breathing-air.

The New York and New England Association of Railway Surgeons.—At the thirteenth annual meeting of the New York State Association of Railway Surgeons, held at the Academy of Medicine, New York City, November 12-13, 1903, a vote was taken and unanimously carried to change the name of the Association to New York and New England Association of Railway Surgeons. This change will greatly extend the good work of the association, and the many benefits to the surgeons and railways in this territory should be mutual.

Place of meeting in 1904 is New York City. Officers elected: President, Dr. C. G. J. Finn, Hempstead, L. I.; first vice-president, Dr. G. P. Conn, Concord, N. H.; second vice-president, Dr. J. P. Creveling, Auburn, N. Y.; secretary, Dr. Geo. Chaffee, 338 Forty-seventh St., Brooklyn, N. Y.; treasurer, Dr. J. K. Stockwell, Oswego, N. Y.

SCANDALS AT THE LEPER SETTLEMENT OF MOLOKAI.

BY A. S. ASHMEAD, M. D., NEW YORK.

333 W. 23D ST., NEW YORK, December 14, 1903.

HON. THEODORE ROOSEVELT,

President of the United States.

SIR:—I beg leave to direct your attention to certain scandals at the Leper Settlement of Molokai. I have already had the honor to write you a letter, as follows:

NEW YORK, August 26, 1903.

HON. THEODORE ROOSEVELT,

President of the United States:

SIR:—I notice in the New York *Times* of yesterday, that Mr. B. H. Osterhout, Director of Charities, Porto Rico, now in Poughkeepsie, N. Y., and Governor Hunt, now in the Adirondacks, will call on you before their return to their posts, to discuss with you, the question of scandal at Cabras Island, Porto Rico: "The Superintendent of the Asylum has been suspended by the Acting Governor, Mr. Hartzell, because chickens and pigs raised by lepers were freely sold in the city of San Juan;" "Intercourse between the colony and the mainland has been permitted;" "Mr. Aldrich has been arrested on the criminal charge of transporting chickens from the leper colony, and has been fined \$50.00." "The Acting Governor has ordered all animals in the leper colony to be killed, and has declared that he will probe the scandal to the bottom, and that none of the guilty shall escape."

I beg to be allowed to inform you, that the actions of the Acting Governor, in this matter, from a leprological scientific standpoint, are most commendable. For it has been found, in Columbia, South America, a country scourged by leprosy (there are 30,000 cases there), that chickens allowed to feed on the refuse of leprosy infected habitations, transmitted the disease. Chickens were fed with pieces of leprous tissue from the mutilated members of lepers, and their eggs transmitted leprosy. No other contact between the sick and the well persons, either immediate or mediate had occurred, and it was the opinion of the eminent leprologist, who investigated this question of contagion, that the germs had been transmitted by the chickens and their eggs.

Allow me the liberty, to take advantage of this opportunity, to question the wisdom of the permission given to the Molokai lepers, to sell their fish to the healthy settlements, not only of Molokai, but of the other islands of the Hawaiian group. All the lepers of Molokai are fishermen. They catch and handle with their diseased hands, thousands upon thousands of pounds

of fish, most of which is sold to the healthy inhabitants, who are, according to ancient custom, *raw* fish eaters. The report of Drs. Jordan and Evermann of the United States Expedition to investigate the Fish and the Fisheries of the Hawaiian Islands, (expert ichthyologists) says: "Fishing is carried on at the settlements by the lepers; the Board of Health purchases all the fish that are caught. Should the fishermen wish to sell personally to the people, they are permitted to do so. The fishermen are all lepers."

Now, there is no compulsory meat ration at the Molokai Leper Asylum, fish being given out to the lepers in lieu thereof. But surely all the fish product of Molokai is not eaten by the lepers themselves! Last year there were caught by these lepers (and by others perhaps), 284,336 pounds of fish by seine, bag net, spear, cast net, and line; most of the amount was caught by line, 144,298 pounds. The value of the catch was \$44,619. Surely the lepers did not eat that much fish. I beg to say further, regarding this last point, that fish can transmit leprosy, especially if eaten raw; and therefore, the lepers of Molokai, should not be allowed to sell their fish to the healthy communities. There are many healthy communities on the island itself, and these should not even receive the fish from leprous hands. A milk and meat ration should be given to the lepers of Molokai, instead of their fish ration. In fact, lepers should not be allowed to eat fish at all, for fish eating (even cooked fish), predisposes to leprosy. To such faulty isolation methods as this, must be attributed the delay in accomplishing eradication of the disease, from the Hawaiian group.

Very respectfully,

ALBERT S. ASHMEAD, M. D.

(Author of Platt-Wanger Leper Bill and Member of Provisional Committee, Berlin Leper Conference.)

As regards the beef supply at the leper settlement of Molokai, to which allusion has been made, I beg to say that it was testified before the United States Senatorial Investigating Committee, that seven pounds of beef was issued as a ration to each leper per week, and that when the lepers chose the five pounds a week of salmon ration, to such persons no beef was issued. If they took fish, they could not have beef. Thus all the persons at Molokai did not get beef. It was also testified, that the butcher of the settlement killed five or six bullocks (according to size) twice a week, or ninety bullocks in two months; that would be forty-five (45) a month, one and a half a day, or ten and a half a week for the supply. As there are, on an average, one thousand persons at Molokai to be fed,

counting the lepers, the well-attendants, the superintendent's official family, etc., those ten and a half bullocks must yield each about seven hundred pounds of dressed beef. We leave out of the calculation the one-half bullock as a stand-off, for those lepers, who chose salmon (or fish), instead of the meat ration.

I am now in receipt of a letter from the Schwarzschild and Sulzberger Company, of New York City, in answer to my inquiry relative to the percentage of dressed beef that would be furnished by cattle, that is ordinary (not prize) cattle, as it is reasonable to believe those of Hawaii are.

Mr. Kuckheim informs me that the best beeves that come to the New York market, weigh on the hoof, 1,300 or 1,400 pounds. In the dressing of them, about one-half the weight is lost. Thus, in Hawaii, the cattle would have to be as good beeves as our best, to furnish seven hundred pounds each of dressed beef, to allow seven pounds a week to each person at the leper settlement, or seven thousand pounds a week for all. In Mr. Kuckheim's opinion, judging from what he has heard of them, the Hawaiian young cattle at Molokai would weigh on the hoof about seven or eight hundred pounds, not over nine hundred pounds any of them, and this last figure for only a few (old cattle nine or ten years old weigh very light). This would allow at the outside, instead of the seven thousand pounds per week required, only, at most, 4,500 pounds, or as is more likely to be the case, only 3,750 pounds. This is not enough to give seven pounds of dressed beef a week to each leper, as Dr. Cooper, President of the Hawaiian Board of Health would have us believe is faithfully done. I have not considered the weight of *inferior* cattle at all. Yet it is probable that some of the "bullocks" slaughtered there are old cows or old cattle.

To this letter I received a reply from the Secretary of the Interior, Mr. Hitchcock, saying, that copies of it had been transmitted to Governors Hunt and Dole, respectively of Porto Rico and Hawaii.

In the course of time I received the following communication from Acting Secretary of the Interior, Mr. Ryan:

"Department of the Interior,
Washington, September 28, 1903.

Albert S. Ashmead, M.D., New York City.

Sir:—In further reply to your letter of the 26th ultimo, in

regard to the proper diet, etc., for lepers, addressed by you to the President and referred to this department for consideration, I transmit herewith for your information copy of a letter dated the 12th instant, received from the Governor of Porto Rico, to whom a copy of your letter was referred, in which he discusses the condition of the leper colony in Porto Rico; and after considering your suggestions, states that such changes have been made in the administration of the leper colony that no apprehension as to its proper management in future need be felt.

"As soon as a report is received from the Governor of Hawaii on the subject, a copy will be transmitted for your information.

Very respectfully,

THOS. RYAN,

Acting Secretary."

Enclosure :

" Executive Mansion, Porto Rico.

San Juan, Porto Rico, September 12, 1903.

" The Honorable The Secretary of the Interior,

Washington, D. C. :

" Sir:—I have the honor to acknowledge the receipt of your reference to this office, dated September 3d, of a letter written by Dr. Albert S. Ashmead of New York to the President, with reference to the matter of an alleged scandal in connection with the leper colony in Porto Rico.

" The Insular Government, among its other public institutions, has maintained for several years upon what is known as Cabras Island, a small island at the mouth of San Juan Harbor, an institution for the care and maintenance of lepers. The number of inmates has varied from 20 to 30 during that time, and we are advised that there are several other unfortunates who have not yet been transported to this institution, but we are taking all steps possible to effect their detention and transportation as soon as possible.

" Several weeks ago it was discovered by the Acting Director of Charities, who made a visit to the island, that quite a number of domestic animals, consisting of dogs, chickens, cats and several goats, were living on the island. There never have been, to my knowledge, any pigs there. At that time it is not believed that any of the animals living on the island had ever been transported to the main land, either for market or any other purpose. The Acting Director of Charities also reported to this office that the conditions surrounding the care of the patients were not good, that the degree of cleanliness which the disease requires had not been preserved, and a number of other delinquencies, including the failure of the Superintendent to keep the records of the case required by law. Upon my ad-

vice, the Acting Director of Charities immediately removed the 'practicante,' or assistant physician, who had immediate charge of the affairs on the island, and suspended the Superintendent, appointing in their places persons in whom we have great confidence. The 'practicante,' after his discharge, did convey certain of the chickens to the main land, for which offense he was arrested and punished by a fine of \$50. We have not been able to find what became of the chickens, but it is not believed that they were placed on the market.

"The Superior Board of Health, which exercises general quarantine control in the island, immediately directed the killing of all animals on the island, which was promptly carried out, and the new practicante and superintendent since that time have been engaged actively in correcting every form of complaint which has been discovered. Thorough cleansing of the quarters has been accomplished, ample clothing, bedding and food have been supplied, and the new officials are giving every attention possible to the care of the unfortunate inmates of this institution. The investigation as to the responsibility for the conditions so disclosed is being conducted by a committee of the Executive Council, which body has supervisory control over the charitable institutions, and upon their report proper action will be taken for the effectual reorganization of this department, as may be required.

Replying to the suggestions of Dr. Ashmead, I beg to advise you that the lepers on the island have never been engaged in fishing, and no fish caught either by them or from the island has ever been allowed to approach the mainland. We are erecting signs upon the island warning all people not to come within 300 feet of the shores, and I do not think that fish is ever used as an article of diet on the island. It has been the constant policy of this government to absolutely isolate this island to the greatest possible degree, and no communication has been allowed except that which seemed absolutely necessary. So far as we can learn, there has never been, prior to the time mentioned, any chickens, eggs, or other articles brought from the island to the mainland, and we feel that with the present experience there need be no apprehension but that the affairs of this institution will be most carefully administered in the future.

Very respectfully,

CHARLES HARTZELL,

Acting Governor."

Mr. Haeselbarth, Director of Charities, Porto Rico, in charge of the lepers of Cabras Island, also wrote me a letter, in which he expressed the appreciation of Governor Hunt and himself for my communications. He stated that he "would make a close study of conditions there and throughout the island."

Evidently Dr. Cooper of Hawaii has wrongly interpreted my reference to Porto Rican leper affairs, when he says that I made charges against Governor Hunt's management of lepers. For my letter was commendatory of the Acting Governor, and I praised him, and it was so accepted by the authorities there. My criticisms were directed against the gross misdirection of Hawaiian authority over leprosy. The following is a letter which I published in the *New York Tribune*, Oct. 12, 1903:

LETTERS TO THE EDITOR.

HAWAIIAN LEPERS AND FISHING.

DR. ASHMEAD FORTIFIES HIS STATEMENTS IN REGARD TO WHAT IS DONE.

To the Editor of the *Tribune*:

Sir:—Replying to a late communication of Dr. Guthrie McConnell, pathologist at the Medico-Chirurgical College of Philadelphia, in which he disputes my statement that lepers at Molokai are permitted to catch, handle and sell fish to the Board of Health, which afterward disposes of them to the healthy population, I beg to submit to you the following proofs: In the preliminary report on the fishes and fisheries of the Hawaiian Islands by Drs. David Starr Jordan and Barton W. Evermann, published by the Bureau of Fisheries, Washington, in 1902, I read: "Fishing is carried on at these settlements (Molokai) by the lepers, three bag nets, valued at \$450, ten cast nets, worth \$100, and \$18 worth of lines being used. The Board of Health for the territory, which has charge of the settlements, purchases all the fish that are caught, provided the fishermen care to dispose of them at a uniform price of seven cents a pound, and distribute these in lieu of meat ration. Should the fishermen wish to sell personally to the people of the settlements, they are permitted to do so. The fishermen are all lepers."

In a letter which I wrote to President Roosevelt on August 26, I mentioned this matter, and gave further details as follows: "Last year there were caught by these lepers (and perhaps others) 284,336 pounds of fish, most of the amount—144,298 pounds—by line. The value of the catch was \$44,619. Surely the lepers of Molokai did not eat that much fish, 'in lieu' even of meat ration. Now, when we consider that most lepers have diseased hands and feet, it is evident that they should not be permitted to catch and handle fish that is intended to be used by healthy people. And this is especially emphatic when we know that Hawaiians eat many of their beloved fish—

amaama (mullet) and oio (bone fish)—raw.”

I beg further to say that this substitution of a fish diet ‘, in lieu of a meat ration’ is a wrong to the lepers. Meat and milk are the proper food for lepers.

New York. Oct. 3, 1903.

ALBERT S. ASHMEAD, M.D.

On Dec. 5, I received the following letter with enclosures :

“ Department of the Interior,
Washington, Dec. 4, 1903.

Dr. Albert S. Ashmead, 333 W. 23d St. New York, N. Y.

Sir :—In further reply to your letter of August 29, 1903, in relation to the proper diet, etc., for lepers, addressed by you to the President, and referred to this Department for consideration, I transmit herewith for your information a copy of a report from the Governor of Hawaii on the subject, together with the accompanying enclosures.

Very Respectfully,

THOS. RYAN,

Acting Secretary.”

Kalaupapa, Molokai, Oct. 2, 1903.

Dr. C. B. Cooper, President of the Board of Health, Honolulu :

Sir :—I quote from the statement of Dr. Albert S. Ashmead, and follow with my comments :

“ In Molokai the Hawaiian lepers are allowed to sell the fish which they catch to the settlements which are healthy.”

The topographical position of the peninsula on which the leper settlement is situated is absolutely prohibitive of any outside intercourse. On the land side of the settlement is an impassible barrier, with the exception of one dangerous trail which is strongly guarded, composed of a mountain chain rising sheer from the settlement to a minimum height of 2,250 feet. This disposes of the possibility of taking fish out of the settlement by land.

There are no boats at the settlement, owned by or obtainable by the lepers, by which fish could be carried to the main portion of the Island of Molokai or the other islands. Finally, there are about 1,700 inhabitants only on Molokai, outside the settlement. There are no villages or markets.

Every outside inhabitant is immeasurably better situated to catch his own fish than are the lepers.

“ They catch and handle with the diseased fingers thousands of pounds of marketable fish, especially the mullet.”

Mullets are not deep water fish, and are practically not known at the leper settlement, as the water near the shore is hundreds of fathoms deep. I later will comment on the diseased condition of the fishermen.

“ Most of the products of these fisheries are sold to healthy inhabitants of the various islands, who, in conformity with a very ancient custom, eat them raw.”

Not a pound of fish caught by lepers is sold away from the settlement. There are fishing banks off another part of the coast of Molokai. Several attempts have been made to conduct a successful fishing business on the banks by gasoline driven vessels from Honolulu. These are probably the fish the United States Fish Commission refer to. No lepers are connected with the business.

Numerous sharks so destroy the nets and steal fish from the lines that the business has been erratic and of doubtful profit.

All highly civilized races vary their diet with fish, and eat the scavengers of the sea, oysters and clams, raw, and much dried and cured but uncooked fish. The Hawaiian, likewise, eats some raw fish (dried fish), and is an expert in baking fish inclosed within leaves in the ground by means of hot stones.

"The report of Dr. Jordan and the United States Fish Commissioners says 'All the lepers are fishermen.' 'Fishing is carried on at the settlement by the lepers.' 'The Board of Health purchases all the fish that are caught.' 'Leprous fishermen may personally sell fish to the people.' 'The Board issues fish to the lepers at the asylum in lieu of meat.'"

A few of the lepers fish. No fishing is done at the settlement by lepers, except individually for individual consumption.

The Board does purchase such surplus of fish as the lepers may catch, and for the entire year of 1892 the total paid out for fish was \$2,260, of which less than one-quarter was paid to the lepers. The first six months of 1903, \$210.80 was paid for fish caught at the settlement, aggregating 4,216 pounds. From outside healthy fishermen 7,600 pounds, costing \$380.05, were purchased.

No person, fisherman or otherwise, is allowed to sell fish personally to the people.

The Board does issue a sensible, healthy and judicious ration of fish to the lepers, and lepers exclusively.

Fresh fish supply, in pounds, from January 1 to June 30, 1903, at the leper settlement, Molokai:

	Feb.	March.	April.	June.	Total.	Price.	Total amount.
Settlement.....	1,292	—	2,924	—	4,216	5c.	\$210 08
Halawa.....	—	2,270	—	—	2,270	5c.	113 50
Halawa.....	—	—	—	1,331	1,331	5c.	66 55
Halawa.....	—	—	—	4,000	4,000	5c.	200 00
Totals	1,292	2,270	2,924	5,331	11,817	5c.	\$590 85

Surely these figures demonstrate the absurdity of the assertion that "284,336 pounds of fish were caught last year at Molokai." I doubt whether there has been that amount of fish caught at the leper settlement during the last twenty years.

In regard to the question of fish being a medium for the transmission of leprosy, in consequence of being eaten raw, and citing the "carp of Japan," which is always eaten raw, and which feeds on mosquitoes, many of which have sucked the blood and sores of lepers," it might be well to call attention to the fact that no "light" or surface fish abound on the windward or leper settlement side of the Island of Molokai. This side of said island is a rockbound coast, with a sheer drop of hundreds of fathoms deep, and with the exception of a small cove (Kalaupapa Landing), no anchorage can be found. It is also a scientifically proven fact that the mosquito will not lay its larvæ in salt, ocean water, let alone the fact, as above mentioned, that the leper settlement is on the windward side of the island, and is exposed to a heavy swell, which breaks on the coast throughout the entire year. Consequently no "still water" can be found by the mosquito in which to lay its eggs.

"Fish caught near the leper settlement is unsafe for general consumption."

No fish brought to the Honolulu or any other market is caught nearer than forty miles from the leper settlement.

"To such faulty methods of 'isolation' we may attribute all the delay in accomplishing eradication of leprosy from the Hawaiian Islands."

This conclusion, by Dr. Ashmead, simply shows he is wholly uninformed, so far as the Hawaiian Islands are concerned, as to the subject on which he assumes to write as an authority.

Many of the lepers are but slightly tainted. The disease takes on many different forms, and is often on the clothed portions of the parties only, and but slightly marked. Many lepers are very strong and vigorous. Athletics are a favorite part of amusement and diversion.

What little fishing is done is mostly by the above described lepers. Not the least harm arises from the fishing done.

The Hawaiian has been an islander for ages, with the sea ever in sight. It is natural he should utilize his products and enjoy the pleasures of the tropical waters.

If an occasional leper chooses to do some individual fishing, he is simply amusing himself and passing idle time.

The Territorial government of Hawaii so completely cares for its leper wards, and so fully supplies their every need, that the Board of Health does not require of the lepers any work whatsoever. None are compelled to work. It would be better for the leper's own physical condition if more were willing to work. Those desirous of working are employed by the superintendent, and are adequately paid.

The Board is aware that the handling of segregated unfortunates is a delicate matter, and endeavors to leave no point open for factious criticism or comment.

What sacrifices the people of the Hawaiian Islands make for their leper charges can be better comprehended when I state that, pro rata, the sum is equal to the people of the United States expending over \$75,000,000 per annum on this one form of disease, if they were correspondingly afflicted.

The disease is confined almost exclusively to the Hawaiian race, and science, care and time will probably eradicate this disease from the islands. It is a slow disease—in fact, one of a lifetime—so we cannot expect sudden or striking improvements. The disease is slowly decreasing, as per statistics.

Very respectfully,

(Signed) J. D. McVEIGH,
Superintendent Leper Settlement.

From copy.

Territorial Board of Health Hawaii.

Honolulu, Hawaii, Oct. 6, 1903.

[In re Communication of the Department of the Interior,
received August 29, 1903, P. and M. Division, 4103 *Miscs.*]

[In answer quote No. 770.]

Hon. Sanford B. Dole,

Governor Territory of Hawaii, Honolulu, T. H.

Sir:—In reply to your request for information on the subject, the matter above designated, I would say that I am surprised that Dr. Albert S. Ashmead of New York should have made the statements contained in his communication without an attempt at verification, through proper authorities.

The Board of Health absolutely controls the leper settlement, and welcomes the investigation of men of recognized scientific, medical and humanitarian standing.

The leper settlement on Molokai is situated on a peninsula comprising some 6,000 acres, strikingly adapted for absolute segregation. On the land side the settlement is cut off by a sheer precipice, 2,250 feet in height at the lowest point, and rising to 4,000 feet. There is an extremely dangerous trail up this height, and over which it is impossible to transport anything. This trail is guarded.

There is but one landing, and that available only to the heavy surfboats used by our interisland steamers. This landing is shut off from any but authorized communication by being surrounded by a double line of heavy wooden barricades. Through this visitors may see and speak with their friends, but no contact or passing of articles is possible without permission. No individuals, supplies or articles can enter or leave the leper settlement except through this barricade and under the supervision of the proper officials.

The only means of communication is by a steamer under contract, under control of the Board of Health.

Except by written permission of the Board, no person is allowed to land or enter the leper settlement. Occasionally friends of the lepers are allowed to land by permit, and for the few hours' stay of the steamer see and talk to their unfortunate friends through the barricade.

Owing to the custom of the Hawaiians of intense embracing and kissing, the precautions taken against contagion are never relaxed.

For thirty miles this windward coast of Molokai is one precipice, against which the rollers perpetually break. There is but one landing.

Although Dr. Ashmead quotes Dr. Jordan and his associates of the United States Fish Commission as his authority the records of the Board of Health fail to show any permit to anyone connected with the expedition to visit the leper settlement on Molokai.

I attach and indorse as correct a statement by J. D. McVeigh, the superintendent of the leper settlement, refuting the charges of Dr. Ashmead.

The careful care given the lepers of the Hawaiian Islands by the local government should receive the commendation of every accurately informed authority. The disease is as old as history, and its amelioration and eradication are earnestly sought, nowhere more than in the Hawaiian Islands.

Sensational assertions carry with them their own condemnation: I am

Very respectfully,
(Signed) CHAS. B. COOPER, M.D.
President of the Board of Health.

Executive Chamber Territory of Hawaii.

Honolulu, Oct. 31, 1903.

The Honorable the Secretary of the Interior, Washington, D.C.

Sir:—In relation to the letters of Dr. A. S. Ashmead to President Roosevelt and Hon. W. H. Hunt, Governor of Porto Rico, dated August 26, 1903 referred by your Department to me for consideration of so much of these as relates to the leper settlement in this Territory I have the honor to report as follows:

The matter was referred to the President of the Board of Health, Dr. C. B. Cooper, for investigation and report and on October 6th I received his report, enclosing a copy of the report of J. D. McVeigh, Superintendent of the leper settlement, copies whereof I enclose herein.

From my own knowledge of the geographical situation of the leper settlement on the island of Molokai, and of the administration thereof for many years past, I can say that Dr. Ashmead's assertions are not only grossly incorrect, but are extremely ridiculous, and are not entitled to further consideration.

Very respectfully,

SANDFORD B. DOLE.

[Two enclosures, original papers, returned herewith.]

In the *New York Tribune*, Dec. 8, 1893, appeared the following:

THE HAWAIIAN LEPERS.

DENIAL OF ABUSES AT THE MOLOKAI SETTLEMENT.

To the Editor of *The Tribune*.

Sir:—In your esteemed paper of October 12, 1903, I noticed a communication from Dr. Ashmead, and in a previous issue another one, in both of which he makes statements in regard to the leper settlement of Molokai, Hawaiian Islands, that I knew to be so distorted I was at once prompted to write to you in regard to the same, having spent nearly all of last winter in the islands, where I studied this question of leprosy with the keenest interest and great thoroughness. I was in touch with the Board of Health and the men who were interested in this subject, and therefore knew that the statements made by Dr. Ashmead could not be true. I, however, thought it best to become certain in regard to it, so under date of October 18 I wrote to the president of the Territorial Board of Health, Dr. Charles B. Cooper, and a copy of his letter to me you will find appended herewith. I enclose also a copy of a letter to Dr. Charles B. Cooper from the superintendent of the leper settlement, together with a letter by Dr. Charles B. Cooper, president of the Board of Health, to the Hon. Sanford, B. Dole, Governor of the Territory of Hawaii, dated October 6, 1903.

W. C. WILE, M.D.

Editor *New England Medical Monthly*.

Danbury, Conn., Nov. 17, 1903.

In the letter of Dr. Cooper to Dr. Wile he wrote in substance:

In this article are some very astounding statements made by Dr. Albert S. Ashmead of New York City regarding the abuses at the leper settlement at Molokai, in which he quotes Drs. David Starr Jordan and Barton W. Evermann as authorities in their report published by the Bureau of Fisheries, Washington, 1902, and which statements, like those of Dr. Ashmead, were disputed by Dr. Guthrie McConnell, pathologist at the Medico-Chirurgical College at Philadelphia.

Recently Dr. McConnell was a visitor to these islands, and as he presented excellent credentials, he was given every opportunity by the Territorial Board of Health to pursue his investigations, and accompanied said Board on their semi-annual trip of investigation to the settlement, and is therefore competent, from personal observation and knowledge, to refute the untrue and astounding statements made by the above named men.

I beg to state that the names of neither Dr. Jordan nor Dr. Evermann, according to the permit book of the Board of Health (permits being absolutely required before landing is allowed at the settlement) are recorded.

The Board of Health is always open to give authentic information, and I have written to Dr. Jordan asking for the source of his erroneous information.

The charges made in Dr. Ashmead's letter concerning the management of the lepers of Porto Rico are even more ridiculous than those made against the Molokai settlement.

I notice also that Dr. Ashmead, in his communication to the editor of *The Tribune*, says: "I beg further to say that this substitution of a fish diet in lieu of meat ration is a wrong to the lepers. Meat and milk are proper food for lepers."

As to the diet of lepers, would say that I believe there is no institution in the world where the patients are as well cared for in a dietary sense. Each patient is allowed twenty-five pounds of paiai a week, which is their chief article of food, eight pounds of fresh meat a week, and from one pint to two quarts of milk each daily. The settlement has a large dairy, at present milking ninety cows. Occasionally fish rations are given out, as per the inclosed statistics in the report of Superintendent McVeigh.

To this was added the letters of Mr. McVeigh to Dr. Cooper, and of Dr. Cooper to Governor Dole, which Dr. Cooper evidently had given out for publication.

Upon the receipt of the letter from Mr. Ryan of the Department of the Interior, and before the publication of the letters of Dr. Cooper and Mr. McVeigh by the *New York Tribune*, I wrote to Dr. David Starr Jordan, President of Leland Stanford University, California, whose report as Chief of the Fish Expedition of Investigation to Hawaii I had quoted from in my letter to President Roosevelt. I told Dr. Jordan that his statistics had been questioned by Dr. Cooper, the President of the Hawaiian Board of Health, and by Mr. McVeigh, Superintendent of the leper settlement at Molokai. I also wrote to Professor L. O. Howard, Chief of the Division of Entomology, U. S. Agricultural Department, Washington, regarding the scientific question raised by Mr. McVeigh in his letter (although he is a non-medical man, and therefore irresponsible), that "in regard to the question of fish being a medium for the transmission of leprosy in consequence of being eaten raw, and citing the carp of Japan, which is always eaten raw, and which feeds on mosquitoes, many of which have sucked the blood and sores of lepers, it might be

well to call attention to the fact that no 'light' or surface fish abound on the windward or leper settlement side of the island of Molokai. This side of said island is a rockbound coast, with a sheer drop of hundreds of fathoms deep, and, with the exception of a small cove (Kalaupapa Landing), no anchorage can be found. It is also a scientifically proven fact that the mosquito will not lay his larvæ in salt ocean water, let alone the fact, as above mentioned, that the leper settlement is on the windward side of the island, and is exposed to a heavy swell, which breaks on the coast throughout the entire year. Consequently no 'still water' can be found by the mosquito in which to lay its eggs."

Here is the reply of Prof. Howard :

Dear Dr. Ashmead :

The malarial mosquitoes have been found in brackish water, and *Culex sollicitans*, *Culex cantator* and *Culex taeniorhynchus* also breed in brackish water, not in the ocean itself, but in salt marshes where, by evaporation, pools become even saltier than the ocean water, and will still maintain mosquito larvæ.

Yours very truly,

L. O. HOWARD.

Mr. McVeigh has overlooked some very important facts which pertain to the question he assumes ability to discuss. And that is the fish ponds of Molokai and the other islands, the ditches in which the Chinese and Japanese have planted their imported gold fish, and the "wet" taro-patches, in which the lepers themselves grow their beloved vegetable, from which "poi" is made. All these places are mosquito breeders. In Molokai there are fifteen of these "still waters," fresh and salt water marshes. The numerous ditches are also fishing places, cultivated actively. There are also the "taro" fields, which must be cultivated, according to the testimony before the Senatorial Investigation Committee, by irrigation, of which the lepers say there is hardly enough. At all events, complaints were made that the cattle of the settlement were often knee-deep in the taro-patch mud during the growing season of the plants. Thus they were mosquito breeders.

Dr. David Starr Jordan has replied to my letter, under date December 11th, as follows :

"Referring to your kind letter of December 5th, permit me to say that all the information published in our report was collected by Mr. John M. Cobb of the Bureau of

Fisheries, who is now in Washington, and whom you might address as to the details. He is an expert statistician, and all the details as to the leper settlement at Molokai were procured by him from the Board of Health of the Territory. The data as to the fisheries also came from this source in part and from other sources. Dr. Cobb did not visit Molokai, and the rest of the Commission have no knowledge of this matter at all except as given in Mr. Cobb's report. We have had some correspondence with Dr. Cooper of the Health Board in regard to the matter, but there would seem to be no particular ground for criticism of the correctness of Mr. Cobb's statements.

(Signed) DAVID S. JORDAN."

Mr. Cobb writes me as follows:

" Department of Commerce and Labor.

Bureau of Fisheries, Washington, D. C.

(Unofficial.) Washington, D. C., Dec. 17, 1903.

Albert S. Ashmead, M.D., 333 W. 23d St., New York.

Dear Sir:—Your letter of the 16th inst., enclosing clipping from the *New York Tribune* of Dec. 8th has been received and contents carefully noted.

The matter of your statement in regard to fishing at the leper settlements on Molokai had previously been called to my attention through a letter from Dr. Cooper to Dr. Jordan, and a reply was sent officially to Dr. Cooper by the Commissioners of the Bureau of Fisheries.

Before proceeding any further, I wish to correct a misapprehension under which all persons engaged in the controversy seem to be laboring, and that is that Drs. Jordan and Evermann are the authors of the report from which you quote. A glance at the Report of the United States Commissioners of Fish and Fisheries for 1901 will show that I am the author. When advance publication was made of my report it was deemed best to bind the preliminary report of Jordan and Evermann with it, as the latter contained certain information which did not appear in mine.

I cannot agree with the interpretation which you place upon the portion of the report relating to the leper settlement. On page 475 of the report I state as follows: "About the center of the northern side of the island, on a point of land extending a considerable distance out into the ocean are located the two settlements," etc. Near the end of the same paragraph I state: "Should the fishermen wish to sell personally to the people of the settlements, they are permitted to do so. The fishermen are all lepers. This fishing has been included in the tables."

The whole paragraph relates exclusively to the leper settlements, of which there are two. I had not the slightest inten-

tion of conveying the impression that the leper fishermen were permitted to sell fish to the other settlements upon the island, and anyone familiar with the geography of the island of Molokai and the conditions governing the leper settlements, would not fail to perceive the manifest impossibility of such a proceeding. Most of the healthy population of Molokai is on the southern, or leeward, side of the island. So far as means of communication are concerned, these latter settlements are much nearer to Honolulu than to the leper settlements. As I understand it, there is no communication between the leper settlements and the outside world except through the steamer controlled by the Board of Health of the Territory.

My whole information in regard to the settlement was obtained from Mr. C. B. Reynolds, who was then superintendent of the leper settlement. I judge from the clipping you sent that Mr. McVeigh is now superintendent. As I understand him, the lepers carried on the fishery as a private enterprise, and if they had a surplus above what they needed for their own use, the Board of Health would purchase same, and pay them a uniform price of seven cents a pound. Also that there were some people at the leper settlement who were able and willing to support themselves, and from these people the fishermen would be able to secure a better price than that given by the Board, and, of course, would prefer to sell all they could to them.

In your original letter to the *Tribune* you gave some figures purporting to be the catch of the fisheries at the leper settlements. Instead of being such, they are my figures for the whole island (Molokai). The total catch for the whole island (Molokai) in 1900 amounted to 376,255 pounds. Of this, the leper settlements caught and sold, either to the Board of Health or to private individuals (no account was taken of the amount they consumed themselves), 46,280 pounds. At that time there were between 1,000 and 1,400 people in the two settlements. Dividing up this catch among them on the basis of 1,200 inhabitants, it would amount to about $38\frac{1}{2}$ pounds of fish per inhabitant during the whole year; not a very large quantity surely. In the table on page 476 the fish-pond catch was omitted after the report left my hands, which explains the discrepancy between the figures given in the text and the sum of the sub-totals in the table. [I am not so sure of that.—ASHMEAD.]

The fish-pond figures appear in a separate table on pages 431-33. There are no fish-ponds on the northern or windward side of Molokai, as the tremendous surf would pound them to pieces. A glance at the plate facing page 476 will show the location of each fish-pond.

The leper settlements of Kalaupapa and Kalawao are on the

northern side of the island, and can easily be found on the chart.

When I was gathering the data for my report the subject of the lepers fishing was brought to my attention, and on interviewing Mr. Reynolds, he very kindly consented to get me complete data on his next trip to the settlements, which he did, and it is this which I have shown in my report. I, of course, made no personal trip to that part of the island, as there was nothing to be seen there in the fishery line that I could not better see elsewhere on the same island. As the matter was of but slight importance, I naturally did not elaborate upon it in my report, although if I had suspected for a moment that such a controversy would have arisen from my one little paragraph: I would have gone into it in detail, and possibly made myself clearer.

So far as my knowledge extends, the statement of Mr. McVeigh in the clipping from the *Tribune* of Dec. 8th is correct.

As to the effect of a fish diet upon lepers, the breeding of mosquitoes in the fish ponds, and the quantity of milk given by the cows, I do not feel competent to give an opinion, as I am not an expert in such lines.

I would be glad at any time to furnish you with additional information or data which you may desire and which I possess.

Yours very truly,

JOHN N. COBB."

Mr. Cobb cannot so easily avoid responsibility for his own Report on Commercial Fisheries of the Hawaiian Island, published by the U. S. Commissioners of Washington, 1902. I read therein on page 431, in the chapter on Fish Ponds, "The total catch for Oahu is 560,283 pounds valued at \$139,714; Molokai is second with 91,919 pounds, valued at \$22,980. The total catch for all the Islands is 682,464 pounds, valued at \$167,041, of which 485,531 pounds, worth \$119,202 are Amaama (Mullet.)" And on page 476 under the heading of The Fisheries of Molokai, I read, "The Amaama (Mullet) is the principle product of the fisheries, 112,514 pounds valued at \$28,154 being taken. Oio (bone fish) is second with 36,000 pounds, worth \$9,000; The total catch for the whole Island amounted to 376,255 pounds, valued at \$67,599. Amaama and Awa were the only species taken in the fish ponds, by far the greater part being of the former. Gill nets took the principle portion, 83,919 pounds, valued at \$20,980, Seines were also used, their catch being 8,000 pounds of Amaama (Mullet,) worth \$2,000."

On page 475, I read, "The fishermen (of Molokai) are *all* lepers." The Board of Health purchases *all* the fish that are caught etc. It distinctly says "all" in both sentences.

On page 434, under heading Honolulu, I read, "In 1851 the first regular market house for sale of fishery product etc., was erected on the wharf, etc." "This is the principal market in the Islands, etc., and has the largest population tributary to it."

In the table following these statements, I read under heading "Table showing by months, numbers, and species of fish sold at the Honolulu market in 1900." Amaama (Mullet,) January, 121,054; February, 94,119; March, 93,056; April, 117,020; May, 87,756; June, 56,299; July, 74,859; August, 52,282; September, 67,112; October, 56,929; November, 79,627; December, 101,951; or a Total of 1,001,571 of Mullet-fish alone were sold in Honolulu, let alone other places. Now the total catch of all the Islands, of Amaama was 485,531 pounds, of which Molokai contributed 112,514 pounds. On page 439, I read, Amaama, the commonest species sells for an average of 25 cents a pound, or $8\frac{1}{2}$ cents each, (that would make 3 fish equal to a pound, which would mean that practically all the Amaama catch of all the Islands was marketed at Honolulu. and the difference in price from 7 cents a pound at Molokai to 25 cents a pound at Honolulu, would be sufficient incentive to the preference of fishermen for the Honolulu market.

On page 439, I read, owing to the impossibility of keeping the catch in a fresh condition more than 24 to 48 hours, the fishermen try not to take more than can be easily sold, etc. On page 377, I read, "The market house at Wailuku is a small affair with only five stalls, which are run by two Chinese and five natives, and is owned by a private individual. The market house with land is valued at about \$1,500. Most of the fish sold here are brought from Kahului, a few miles away, while some Amaama come from the island of Molokai. It has no government supervision, which it needs. The principal market house at Lahaina is owned by the Government, and is valued at \$6,000, etc. It contains six stalls, etc. These were run in 1900 by one American, four Japanese, and four natives. Two other stalls (private) are operated by four Japanese. In addition in 1900, there were two private additional fish

markets in town, valued at \$650. These contained six stalls, which were run by four Chinese, four Japanese, and four natives. There is no inspector at Lahaina, although one is sorely needed, as the sale of tainted fish, particularly by the Japanese is quite common. Lahaina is the *principal market* for the disposal of the fish taken by the fishermen on Molokai and Lanai."

Wailuku and Lahaina are on Maui (healthy settlements).

The general method of preparing larger fish on account of scarcity of ice to preserve them, is to split open the back, remove the entrails, and lightly salt them, and put them in a container, where they remain over night. The fish are not washed before salting. In the morning the pots are taken out, the salt shaken from them, and they are put in a pan of fresh water, after which they are placed upon rude racks or boards covered with cocoanut leaves, and allowed to remain there while the sun dries them. They are put under cover at night. Thus prepared they will keep for some time.

Opelu, *Amaama*, Akale, and Aku are the species usually preserved in this manner. A considerable quantity of *Amaama* on Kauai during 1901 was dried, and afterwards it was all condemned when it reached the Honolulu market, owing to the careless manner in which it had been prepared.

The fish ponds are principally in the hands of two Chinese firms of Honolulu, who have control of the principal source of supply of the *Amaama* and Awa for a considerable part of the year, and are enabled to keep up the prices for this species.

Thus it will be seen that the *Amaama* of Molokai is sold to the healthy population of Hawaii.

I quote now from the Report of Joint Committee of Hawaiian Senate and House of Representatives on Leper Settlement, dated Kalaupapa, Molokai, March 2nd, 1901.

John Kanani, a leper being called, made the following statement. I own horses, wagons, and brakes, etc., (all the fish is taken to market in carts.) We have had no meat which is fit for any one to eat for the last few years. From 1891 to date I have eaten this meat which is not fit to eat." "Is that the only meat that the Board gives you?" was asked. Ans. "Beef and salt salmon; in 1900 meat and salt salmon, and corned beef from California. The beef I said before is not fit to eat,

is the fresh beef. From the first of the year we have had tinned beef. I have these tins in my house yet. It is not fit to eat. The fresh beef comes in different seasons. The meat keeper when he goes to cut the meat always has trouble, because there is such a jam of people coming together, and the stronger ones always trample the weaker ones. If you want salmon, and ask for salmon, they will not give it to you until all the beef is disposed of. Sometimes the "poi" is good. When I came here first the "poi" used to come from Wailuku. When it came there were worms in the "poi" three inches long. That was in 1890."

The lepers also testified that the road that runs through the settlement to *Waikolu* has been enclosed by a fence, and gates put at both ends. The cattle are brought in and penned in during the night, but they jump out on the "*Mauka*" side, and destroy and eat up the plants, the cane, and other things planted by us. *Waikolu* is not *Kalawao* or *Kalaupapa*.

Taro planting is conducted at *Waikolu*. The Board of Health takes from the leper (it was testified to), 25 per cent of all the proceeds, according to a regulation made by the Superintendent and Assistant Superintendents.

A leper testified that the valley was utilized to raise taro, he complained that trouble arose by running too much cold water, and not allowing it to remain. The still water warms the ground, and gives maturity to the "taro" plants.

A leper testified that seven pounds of meat was not enough ration if bone was given with it.

Mr. Ray, a leper testified that the only ration he took from the Board of Health was rice, which he fed to the chickens. Nine tenths of the rice he said, was fed to the chickens.

How about the matter of beef, was asked. "Well the beef," he answered "was of very poor quality. It would be enough if it was not so bony. I generally threw it away, or it is not eatable. And the butchering is bad. There have been 98 cattle per month, and they would be put in a pen and never let out until they were all killed, and by the time the last one was gone, it was nothing but bone and black meat, not eatable. You get bone sometimes in splinters and bruised badly by cutting with a wide axe."

"How many cattle are killed a day?"

Ans. : " I think about five or six."

" Then the ninety-eight bullocks brought here would last how long ?"

Ans. : " Forty-five about a month, and ninety would last two months."

" I buy all the things I want from the outside, because I cannot get what I want at the store. Things do not trouble me here except meat, because I have to get meat here, I can get nowhere else."

It was testified that the way the weekly allowances were arranged is: If he wants meat, he takes $7\frac{1}{2}$ pounds, or 5 pounds of salmon. If he takes the salmon, he cannot have the beef. Evidently imported salmon is the fish ration issued by the Board of Health.

John Wilmington, storekeeper, testified as to who fixes the price of store-worn goods, or condemned food stuffs. " I put the price down, and sell it at that price."

" Your object is to see that the store makes expenses?" was asked.

Ans. : " Yes."

" Would you charge 25 cents for 5 cents worth of goods?"

Ans. : " If I knew the price of an article was 5 cents, I will sell it for 5 cents."

" If they offer you less will you accept it?"

Ans. : " I will accept it."

" If they should offer you 1 cent would you accept it?"

Ans. : " Yes."

It was also testified to that leper planters of taro of Waikolu and Wailua, (not Kalaupapa and Kalawao) were giving the Board of Health trouble. These planters go and help themselves to " taro," and use it without considering the share of the Board of Health.

John T. Unea, a leper testified. First: The control of the Settlement must be taken away from the Board of Health for good, and sufficient reasons. The reason is the employees of the Board of Health here are doing things in such a way that they are squeezing our necks. Those of us who took rations in " taro" were *ordered to go to* Waikolu, and get the watery " taro." Men were employed to look after the " bullocks and carts." The one man who looks after the bullock-carts gets \$25 a month.

Pinehaka, a leper, was asked: "Are you living at Kalau-papa?" And answered: "Only when I come to visit; I live in Waipolu. My work is planting taro for the Board of Health."

Waipolu is not Kalapaupa or Kalawao.

Kapiula testified that he was a leper who lived at Kalawao first, but was given a house afterwards at Kawaluna; stayed there and improved the place. "I was drunk, and there were others drunk also, but I was the only one expelled from the place. They kicked me away from the place I had improved, for being drunk."

"Where do you get the liquor, as it is prohibited by the Board of Health?" he was asked.

Ans.: "From friends."

"Is intoxicating liquor sold at the settlement?"

Ans.: "Yes. Sometimes I pay for it, and sometimes I get, it for nothing."

Mrs. Feary, wife of the Assistant Superintendent, testified that the leper boys borrowed money to drink "swipes," and they are awful boys for drinking beer.

Mr. Dalton, an American, testified that no government would be successful that gave a dispensary license to sell liquors, bottled and sealed, etc. "It would be," he said, "a pandemonium, a hell on earth. You can put that down in big letters. Anything that gives them liquor brings hell here."

Robert Kawao, sworn, testified: "There are quite a number of people here who have the drinking habit before they come here, and the habit still remains after they get here."

"How much ground is given over to the cultivation of 'awa?" was asked,

Ans.: "Three or four acres. Awa does not make a tendency to fight. Whereas 'swipes' usually raises trouble, often between husband and wife. When a man is drunk with 'awa' he simply wants to sleep."

Mr. Dalton also said: "As to the matter of liquor and the promiscuous making of 'swipes,' that it was terrible. Of course there never has been any whisky or regular liquors here, except the very small quantity some one would bring in his pocket. It has always been the 'swipes. When the 'swipes' are prevalent it is not pleasant for us here."

"What is the percentage outside of the two homes to-day using the 'swipes?'" was asked:

Ans: "For some time there would be hardly anybody making the 'swipes.' It is only when they get sweet potatoes, and sometime they do not have any for a while, then there will be a regular deluge of it. There are parties close by who will have 'swipes' when it can be had. As a general thing they sell it; but our inmates they entice to drink; it is generally given to them. It is considered a good joke to get the inmates of our home drunk. There are 120 to 140 inmates of the home, all boys who have no parents. We have had them as young as five or six years; the youngest now is eight years."

[To be continued]

ADRENALIN IN THE TREATMENT OF THE CARDIAC TOXEMIA OF PNEUMONIA.

The writer, Henry L. Elsner, M.D., of Syracuse, N.Y., (*New York Medical Journal*, Jan. 2nd, 1904), directs attention to the appalling mortality of pneumonia due to the resulting cardiac toxemia. The prime factor in this disease is a toxemia with obstructions in the pulmonary circuit, leading to cardiac asthenia. Marked changes occur in the right half of the heart, with far-reaching degenerative changes in the muscle, heart clots, and vasomotor paralysis.

Three remedies meet the indications presented by the circulatory changes due to paralysis of the vasomotor centers, the dilated condition of the arteries and the weakened heart. These are strychnine, digitalis, and suprarenal extract or Adrenalin, its active principle. Adrenalin acts on the heart and blood vessels favourably; it does not act on the vasomotor center. Hence, it may be used to assist strychnine. When the vasomotor center is exhausted, and blood pressure study proves the inefficiency of strychnine. Adrenalin may still be administered, and in some cases which seem unpromising, when combined with the method of stimulation about to be suggested, we may carry the patient beyond the critical period to a safe recovery. Suprarenal extract or Adrenalin, has seemed to the author to act as a needed food in all infections

where there is danger of myocardial degeneration. He reports a case of pneumonia, in a woman, the mother of five children, in whom it had been impossible to raise a continually lowering blood pressure with strychnine. The systolic blood pressure was almost immediately raised by the repeated administration at short intervals of fifteen minutes of a one to one thousand solution of Adrenalin hypodermatically, and the patient was saved.

SUPPURATING APPENDICITIS OPENING INTO THE BLADDER.

BY DR. ENRIQUE FORTUN, SURGEON OF HOSPITAL NO. 1, HAVANA,
CUBA.

Jaun G., a Spanish merchant, 37 years old, with evident syphilitic antecedents, began to suffer about two months ago acute pains in the right iliac pit, while a tumefaction was observed in that region,

He became an inmate of a clinic of this city, where his case was diagnosed as malignant neoplasm. After remaining about 20 days in said clinic, the patient decided to leave for Spain; in the meantime he stopped at an hotel here. While there he was taken with violent fever and ague, with a temperature of about 41 degrees C., and the first micturition following this attack did show the presence of a great quantity of pus.

Dr. Parra who was attending the patient, did me the honor to ask me to assist him. I called on him the night after the evacuation of pus had occurred.

The first symptom to which my attention was called upon examination was the dimension and hardness of the liver, with swellings, the massiveness of which continued uninterruptedly in connection with the massiveness of the iliac pit, in which region (the right iliac pit) an accentuated muscular resistance was observed, though that region instead of being swollen presented a depression, at the bottom of which the rim of the hepatic gland could be felt by the hand. The temperature was 38 degrees, the pulse beat between 80 and 90, and the general condition of the patient was rather satisfactory.

The diagnosis offered no doubt in our opinion: Suppurating Appendicitis with evacuation into the bladder (the urine which

was shown to us was extremely fetid and mingled, and it did contain a large quantity of pus) and syphilitic cirrhosis of the liver.

We advised the patient to consent to be operated upon, which he did. On the following day an incision of about 7 centimetres was made in the middle of the depression observed in the iliac pit. We rapidly reached a perfectly defined cavity, which contained a little pus mixed with mucosities. We washed out the cavity with Hydrozone and plugged it with iodoform gauze. On the following day, when we dressed the wound, upon careful examination of the cavity, we did not find any connection with the bladder, but we could extract the appendix which was affected by feces.

A complete cure was accomplished in a month, and during that time the liver decreased considerably in volume. Since the third day of the operation antisyphilitic treatment was followed.

The communication between the cavity of the abscess and the bladder healed after 12 days of treatment.— *Revista Medica Cubana*, July, 1903.

PRACTICAL LESSONS FROM AN EXPERIENCE OF MORE THAN ONE HUNDRED CASES OF ECLAMPSIA.*

BY BARTON COOKE HIRST, M.D., PHILADELPHIA, PA.

In the University Maternity we have the records of fifty-four cases of eclampsia. In ten year's service in the Maternity Hospital, in seventeen years service in the Philadelphia Hospital, in private and consulting practise I have seen an equal or greater number. Certain facts stand out from this experience which should be emphasized at present, I think, in view of the prevalence of theories not reconcilable with clinical observation nor with the best treatment of the patient.

There are three phases of the subject on which clinical experience throws a valuable light: etiology, the premonitory signs, the preventive and the curative treatment.

It is not the purpose of this brief communication to enter the maze of theories about the etiology of eclampsia: whether the

*Read before the Philadelphia County Medical Society, Dec. 9, 1903.

disease depends upon an embolism of placental cells; upon cytolysis of the syncytium, the consequent production of a toxin, and the failure of the organism to produce an antitoxin; upon deficient work on the part of the liver in the reduction of the products of metabolism, and of excess nitrogenous food to urea; upon hyperactivity of the suprarenals or deficient activity of the thyroid; upon resorption of toxins due to microbic infection, is not yet demonstrated. There is no theory yet advanced which has the same basis of common sense and is in such accord with clinical observation as the long-accepted view that the products of fetal metabolism discharged into the maternal blood and eventually eliminated by the maternal kidneys are the chief predisposing cause of eclampsia, and that insufficient elimination by the maternal kidneys is the chief exciting cause. Dienst, one of the latest investigators¹ of the subject, has come back to this view and says, with scientific circumlocution, what the clinician has been saying for a generation. Anything which throws extra work on the kidneys, as a heavy nitrogenous diet and deficient activity of the skin and bowels: anything which impairs the functional activity of the kidneys, as the congestion of an acute nephritis or pressure upon the ureters, is well known to determine an eclamptic attack. As a rule, eclampsia is a disease only of late pregnancy with a living fetus, and is about ten times more frequent in twin than in single pregnancies, showing the probability, at least, of the fetal origin of the toxins of the disease. It is true that rare exceptions to this general rule are observed. Eclampsia has occurred as early as the second month of gestation and as late as six weeks after delivery. But it is open to question whether these cases were not ordinary uremic convulsions. I have a patient in the Maternity at present who has had convulsions in two successive pregnancies at the third and at the fourth month, but she has advanced nephritis and her convulsions are such as might occur in any nephritic subject, whether she is pregnant or not. No doubt the irritability of the cortical cells in the brain, characteristic of pregnancy, had already developed in the woman and determined the convulsive

1. Herzfeld, from an experience of 81 autopsies on eclamptic subjects unqualifiedly declares that insufficient renal excretion, due to a diseased condition of the epithelium, is the cause of eclampsia. *Centralbl. f. Gyn.*, 1901, No. 40. Bar found the kidneys badly diseased in every one of the cases he examined. *L'Obstétrique*, 1903.

rather than the comatose form of uremia in her. An argument often advanced against the responsibility of the maternal kidneys for eclampsia is the alleged fact that women with nephritis are not liable to eclampsia. One set of German statistics is frequently quoted to the effect that only 5 per cent. of nephritic subjects in pregnancy develop eclampsia. The way in which these statistics are exploited by the supporters of some of the newer theories to account for eclampsia would, it seems to me, lead the inexperienced to believe that disease or impaired functional activity of the kidneys in pregnancy may be regarded with entire indifference. No view could be more incorrect or more harmful to our patients. It is not true that women with nephritis are not disposed to eclampsia. The reasons why a comparatively small percentage of them actually arrive at the convulsive stage of the disease are that abortion, miscarriage and premature death of the fetus is the rule in the nephritis of gravid women: that the signs of toxemia appear so early and are so marked as often to call for the artificial termination of pregnancy: that such patients are subjected to an unusually careful dietetic and other treatment and that a long-continued imperfect elimination has made the organism tolerant to toxins. It has been my experience that pregnant women with nephritis or with a predisposition to nephritis by heredity almost invariably demand active treatment to combat a gestational toxemia, and usually require a premature termination of pregnancy. There is nothing, therefore, in the clinical observation of nephritis in pregnancy to shake our belief in insufficient renal activity as a cause of eclampsia, and we should hold fast to the lesson taught by many a bitter experience that nephritis in pregnancy is one of the gravest complications, demanding constant care and never to be regarded with indifference.

Among the premonitory signs of eclampsia there is nothing comparable in value, to the experienced physician, with albumin in considerable and increasing quantities in the filtered urine. It is true that a certain proportion of cases occur without precedent albuminuria, but their proportion is not nearly so large as one would infer from the report of sporadic cases with which recent medical literature is filled. In all my cases there were only two in which albumin was absent. In one of these the postmortem examination showed a chronic nephritis dat-

ing from an attack of scarlet fever five years before. In a recent report of 322 cases of eclampsia from the *Charité* in Berlin albumin was absent in only six. There is no other symptom of a gestational toxemia and threatened eclampsia so constant and characteristic as this. The urea excretion is valueless in comparison. Pregnant women excrete anywhere from three to over thirty grams a day, but usually less than the normal twenty to twenty-four grams. I have repeatedly seen a very low output without the slightest disturbance of health, and occasionally a rapidly increasing toxemia with an excretion of more than thirty grams. Any one who is ill advised or inexperienced enough to attach much importance to urea elimination as a sign of gestational toxemia or threatened eclampsia will be constantly making blunders in diagnosis and treatment.

Casts, other than hyaline, should of course be looked for, but their quantity cannot be measured; they usually accompany albuminuria, increasing with the increase of albumin and disappearing with its decrease, so that their presence and number do not give the clinician as valuable a guide to the requisite therapeutic measures as the quantity and increase of albumin. It is a clinical rule with few exceptions that albuminuria precedes the other signs of gestational toxemia, that the gravity of the woman's condition can be measured by the steady increase in the amount of albumin in spite of treatment, and that a steady and rapid increase of albumin is the most certain and constant premonitory sign of eclampsia that we possess at present. A disregard of this clinical rule is apt to be disastrous to the patient and detrimental to the physician's reputation; yet the impression created by much of the recent literature on the subject, it seems to me, is that albuminuria is unimportant as a danger signal in pregnancy—a view largely theoretical and speculative that cannot be based on sufficient clinical experience. One factor contributing to this view is the use lately of a delicate and unreliable test for albuminuria. Potassium ferrocyanide gives a reaction with albumin, with albumoses, etc., giving the impression that albuminuria is much more common in pregnancy and less serious than is really the case.

The preventive treatment is based by every one, I think, on the theory of kidney inadequacy, whether the individual authority accepts that theory or not. It consists, as we all know,

of a milk diet, diaphoresis, diuresis and catharsis, with extra precautions against chilling the skin. The use of thyroid extract as proposed by Nicholson is still on trial. I propose to make a study of it in the Maternity.

The curative treatment is too large a subject to be treated *in extenso*. Certain disputed points, however, are open to discussion, and on no division of the whole subject is clinical experience so safe a guide. The most important therapeutic measure on which there is still a difference of opinion is the obstetrical treatment of eclampsia in pregnancy and labor. The views as to the necessity of a rapid evacuation of the uterus are widely divergent. It is easy to understand the feeling which prompts a resort to *accouchement force* in eclampsia. The fetus *in utero* seems to be the cause of the eclampsia; the intra-abdominal pressure of advanced pregnancy is an embarrassment to the kidneys; as demonstrated by Herzfeld, a large proportion of the cases is due to pressure on the ureters; there is a general belief that eclampsia is less dangerous after delivery than before, and there are numerous clinical records of convulsions ceasing with delivery and not recurring. I entered on practice firmly convinced that the rapid evacuation of the uterus was the proper treatment, and I have twice reverted to this view, but increasing experience forces me to the conclusion that it is erroneous. The operative procedures necessary, even with the aid of such an excellent instrument as Bossi's dilator, are often followed by injury and shock which an eclamptic patient cannot well endure. I have seen deaths from this cause that might perhaps have been averted by a more conservative treatment. Moreover, recent statistics show that postpartum eclampsia is very little less dangerous than antepartum or intrapartum convulsions, and that the proportion of cases in which convulsions cease after labor is smaller than is generally supposed. After an extended and repeated trial of both plans, I am better satisfied with the treatment directed solely to the eclampsia without regard to the uterine contents, until such a degree of dilation of the os is secured spontaneously that delivery can easily be secured without violence. In antepartum eclampsia evacuation of the uterus is only indicated if, after the eclampsia is controlled, the patient's urine is persistently albuminous and filled with casts,

or if other symptoms of gestational toxemia continue to a degree that excites anxiety. In such a case it is better, if possible, to induce labor slowly by bougies or the Voorhees bags rather than to resort to a forced delivery. Meanwhile the eliminative treatment by diuresis, catharsis and diaphoresis should be actively employed. It necessarily follows that any one holding these views cannot approve of Cesarean section for eclampsia. There is no treatment of the disease with such a high mortality except the pilocarpine treatment. One has a mortality of over 40, the other of over 60 per cent.

As to the treatment of the convulsions, it is well understood that we must employ two sets of remedies: one to eliminate the poison, the other to quiet nervous irritability and muscular activity. It is generally agreed that normal salt injections, sweats and purgation are the most reliable measures under the first heading. Diuretics during eclampsia are of no use, because the kidneys during the attack are practically non-existent as excretory organs. There is usually anuria or a scanty quality of bloody, albuminous urine, in which, by the way, the percentage of urea is often normal for a pregnant woman. Venesection should be classed among the eliminate measures; but after resorting to it almost routinely at first, I now rarely do so. Among these sedatives, chloral and opium dispute the field. I confess to a prejudice against the latter, because it antagonizes the eliminative treatment and there is, it would seem, danger of fatal poisoning from the large doses required, in view of the inactivity of the kidneys. The experience of my colleague, Dr. Tyson, who saw fatal poisoning in a nephritic subject from a dram of paregoric, is always present in my mind. For the relief of the arterial tension and spasmodic contraction of the arterioles we have always used *veratrum viride*. An experience of twenty years with it confirms the good impression originally conceived. Nicholson's arguments in favor of thyroid extract in five or ten-grain doses for the same purpose are plausible, and I intend to give it a trial; but there are cases in which the ingestion by the mouth of five-grain tablets would be difficult or impossible.

Finally, I would urge the advantages of treating eclampsia in a well appointed hospital. Nothing is more disheartening than the inadequacy of this treatment observed, in consulting

practice in private houses. If cases of eclampsia were transported in an ambulance without delay to a hospital well appointed for their treatment and with a staff thoroughly drilled in the management of such cases, the mortality could be kept at or under 13 per cent., which is less than half what it is in private practice. In other words, a patient would have more than double the chance of recovery that she has in her own home.

THE ROLE OF INTRACELLULAR CATALYTIC PROCESSES IN THE PATHOGENESIS OF MALIGNANT NEOPLASMS.*

BY JOHN C. HEMMETER, M.D., PH.D., OF BALTIMORE, MD.

In the paper presented I have endeavored to consider the pathogenesis of carcinoma from the standpoint of the chemist and physiologist rather than from the bacteriological standpoint. The principal hypotheses were referred to and the difficulties in the way of the acceptance of the parasitic theory briefly given. The changes which cells may undergo under normal and abnormal conditions were presented in the paragraph on "metaplasia" In order to narrow down the point of inquiry the investigations were made upon one type of carcinoma only, that with which the author has greatest familiarity, the adeno-carcinoma of the stomach. A résumé of recent experiments on tumor transplantation preceded the writer's personal experiments, the main conclusion of which was, that gastric ulcers can be experimentally produced, and that the edges of these gastric ulcers can be brought to undergo adenomatous transformation by the injection of a cell-free and sterile fluid obtained from a carcinoma of the same organ from the same species of animal. It is not asserted that these adenomatous developments are genuine carcinomata, but they closely resemble the histological structure of adeno-carcinoma.

Inasmuch as this filtrate was destroyed after being heated to 60° C., it was concluded that the agent active in causing this abnormal proliferation at the edges of experimental gastric

*Abstract of the paper read before the Philadelphia County Medical Society, March 11, 1908.

ulcers was a catalytic agent. It might be objected here that the successful experiments were too small in number to permit of reliable conclusions. On this point, I wish to state that the experiments extended through years, and at times had to be given up entirely for five to six months for lack of material, because I believed that I could only work with carcinoma material developed spontaneously in animals. The main reason for this is to be sought in the fact that the experimental adenomata are very small, in three out of four cases their recognition depended upon microscopical examination. Although I was and still am in communication with the principal veterinary schools of this country, and even with Professor Ostertag and Professor Regenbogen of the "Tierärztliche Hochschule" of Berlin, I have come into the possession of only one dog with carcinoma of the stomach. The investigations would have been indefinitely delayed had I depended exclusively upon this material. At present I am still engaged with these experiments, and by the aid of Professor Frank Martin and Dr. J. Mason Hundley, from whose aseptic technique I hope to secure a larger number of recoveries from the operations described, I hope to be able to report an additional number of successful experiments in the near future.

The fact that in one instance carcinomatous degeneration developed at the edges of a pre-existing gastric ulcer spontaneously gives promise of a new source from which to derive canine carcinoma material. At the same time this spontaneous developement of carcinoma may be interpreted as a criticism of my deductions. It may be argued that the injection of the sterile and cell-free carcinoma extract does not prove that an enzymatic agent is necessary to start already proliferating cells into a condition of malignancy (assuming for the present that the experimental adenomata were malignant in type). Upon closer consideration, however, this criticism can hardly be considered as invalidating the main deductions, for throughout our considerations I have not argued that something entirely extraneous to the cell is needed to cause a typical proliferation, but, on the contrary, I have tried to emphasize that the agent is something which the cell contains or produces within itself, but that its regulatory mechanism is destroyed.

The adherents of the parasitic theory might argue that the

carcinoma extract, though sterile, might contain the products of bacterial metabolism, toxins, etc., which are soluble and can pass through a Pasteur filter, and that it was these toxins that acted as the agency causing the abnormal growth. This objection it is impossible to meet. It might be urged, however, as far as we can judge from the infectious diseases, that bacterial toxins may, after injection, cause the clinical picture of the disease, but not the characteristic histological alterations in the cells of the tissue which are concomitant with an infection by the living bacteria. Injections of tuberculin, for instance, cannot cause tubercles. A possible objection is also found in the fact that adenomata of the digestive canal have been caused by mechanical injuries; for instance, by cutting off the lower ends of the glands of Brunner and of Lieberkühn. This observation has not as yet been satisfactorily been investigated, and it has not been claimed that adenomata caused in this way were malignant. Lubarsch (*zur Lehre v. d. Geschwulsten*, p. 253), succeeded in producing a fibroadenoma in the liver by transplanting a portion of liver into an artificial lesion made in another region of this organ. He does not maintain, however, that this was a malignant, or as he prefers to designate it, an "autonomous" neoplasm, and presumes that his experimental neoplasm would have eventually given way to a connective tissue cicatrix.

In the preceeding it has been pointed out that the autonomous development of neoplasms (adenomata) may be due to subtle damage to cytoplasm, which is, in fact, another way of expressing the traumatic and irritation etiology of neoplasms. I do not wish to dispute such possibilities. On the contrary, they are to a large extent necessary for the bringing about of deranged catalytic action already described. It is important to emphasize in this connection that I have not succeeded in producing an adenocarcinoma by cutting or bruising the gastric glands, not even when they were in the environment of a pre-existing lesion.

The studies concerning the effect of osmotic pressure upon normal and carcinoma cells suggest the influence of physical energies upon normal as well as abnormal cell growth, and that future investigations along this line, even, promise to throw light upon this problem.

The immediate and specific causes of cell division are next considered. The theories of Virchow, Thiersch, Boll, and Weigert are abstracted, and the conclusion reached that the stimulus to normal cell growth is of a chemical nature.

The influence of physical laws upon cell growth constitutes another paragraph, which is followed by a consideration of the question of how the cell builds up protoplasm, that is, the methods and means, by which it carries on the synthesis of its own substance. It is here suggested that this is effected by means of intracellular catalyzers.

The conception of how the cell protoplasm must be constructed, its possible chemical organization, concludes with a support of the view accepting the foam structure of protoplasm, and of a special catalyzer regulating the synthetical construction of protoplasm.

As the cell is conceived to be made up of innumerable ultra-microscopical compartments, the more subtle and partial damage of cytoplasm and nucleus in disordering the orderly and normal performances of intracellular catalysis, are next set forth.

The reversibility of the enzymes is then briefly considered, and the possibility of damage to the ferment which controls the upbuilding of protoplasm is suggested, and also that there cannot be ubiquitous chemical equivalence of protoplasm.

In the final paragraph on metastases, the suggestion is thrown out that possibly the blood serum contains defensive substances effective in the destruction of carcinoma cells, and a study of this means of defence gives hope of a more successful form of treatment.

Suture of the Heart.—Another case of suture of the heart has been going the round of the Press. The patient was a man who had been stabbed, the knife having passed through the pericardium and wounded the ventricle. He was admitted to the London Hospital, where the external wound was enlarged and the wounds in the heart and pericardium sutured, and so far the patient is reported to be doing well. These cases are very rare, only three or four having so far been placed on record.—*Med. Press & Cir.*

SOCIETY PROCEEDINGS.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Meeting held October 5, 1903.

The President, Dr. James Hawley Burtenshaw, in the Chair.

AMPUTATION OF BREAST, DEMONSTRATING TRIANGULAR DRESSING OF ARM.

Dr. J. A. Bodine presented three cases of amputation of the breast for carcinoma, in which the arm had been dressed during the healing period on a triangle holding the upper arm at right angles to the body. He called attention to the consequent freedom with which the patients could use their arms. He had been using this dressing in all such cases for the past three years. An isosceles triangle made of light splint-wood, held in position by rubber adhesive strips, is so placed against the side of the chest that the upper arm is at right angles to the body, while the forearm in supination rests along one side of the triangle with the hand resting upon the hip. The triangle presses along the body between the line of incision for removal of the breast and the posterior puncture made for the drainage-tube. The arm being in this position the patient is perfectly comfortable while in bed, and also while walking about. Adherence of the skin flap and scar to the under surface of the arm after enucleation of the axillary contents is an inch and a half to two inches nearer the shoulder end of the arm when dressed in this position than it is when bound against the chest. It is this difference in position of attachment of the scar and skin flap to the arm, that gives such freedom from cicatricial contraction following amputation of the breast.

Dr. R. H. M. Dawbarn said that he had employed the method demonstrated by Dr. Bodine several times. It is more comfortable because the abduction of the arm slides the scar so that it does not adhere to the region of the vein nor the main lymphatics. Patients at times have been made very miserable after amputation of the breast by swelling of the arm, due to adhesion of the scar, the forearm and arm becoming large and edematous, and annoying the patient for a long time. He avoids it, partly by carrying the incision up the middle or even posterior part of the axilla, although the main dissection is

sharply forward in the anterior portion of the axilla where the main vessels lie.

There is only one muscle which can take the place of the pectoralis major and minor, both of which must be entirely removed in the modern operation, and that is the deltoid. It is wonderful how this muscle hypertrophies, and being inserted into the outer third of the collar-bone, with a very poor leverage, how it accomplishes its mission. In the case of women who have very weak deltoids (the reverse of those shown by Dr. Bodine), it has been part of his regular operation of late years to dissect free from the clavicle one inch of the anterior edge of the deltoid, and to carry it inward as far as it will easily go, and then to sew it to the stump of the pectoralis major. That muscle, in course of time becomes hypertrophied, and it helps a great deal; but in cases in which this operation is performed, it obviously would not do to use the isosceles triangle, with its necessary abduction of the arm. In the technique just described, as to the deltoid, the cephalic vein is liable to cause trouble, and he generally ties it off, but this may not be necessary if great care is taken. It is only when the axillary vein is involved in the cancerous growth that saving the little cephalic vein becomes a matter of importance.

EXTIRPATION OF THE JAW.

Dr. Bodine also presented two cases of face surgery to illustrate two practical points which he considers important in the treatment of these cases: Control of hemorrhage in all surgery above the level of the cricoid cartilage, is accomplished by rapidly making an incision down to the carotid artery supplying the area to be invaded, passing an ordinary rubber band that has been boiled, around the vessel, and having it pulled taut by an assistant, thus as effectually controlling the blood-current as in the case of an Esmarch bandage around a limb. The rubber is withdrawn after the operation is completed, without having done any damage to the walls of the blood-vessel. He had followed this plan many years in excisions of the tongue or jaw, and in other bloody work about the head or face. The second point that the doctor wished to emphasize was that wounds of the face made by the surgeon should never be dressed with gauze. If no dressing whatever is applied, and the wound is exposed to the atmosphere, it heals per primam. Dressings

applied to the wound usually become saturated either with tear or with saliva, thus certainly infecting the line of incision.

One patient presented to the Society had carcinoma of the superior maxilla. A wide removal was practised, the hemorrhage being controlled as stated above. He did not lose more than a teaspoonful of blood during the operation, suffered no shock whatever, and on the third day after operation was permitted to walk about the ward.

The second case was one of removal of the left-half of the upper lip, the gap being filled in by a plastic manœuvre. The wound had healed per primam, no dressing having been applied.

FRACTURE OF THE PATELLA.

Dr. Bodine showed a case of fracture of the patella in which primary suture of the capsule had been practised. He said that in fracture of this bone, the open operation of suture of the capsule is always to be preferred to treatment by splints. It is impossible to obtain bony union with perfect joint function in any other way than by open incision. The fringe of the fibroperiosteal capsule invariably drops between the broken margins of the patella, effectually preventing bony union. In addition, a blood-clot forms, which becomes organized and fixed. The only objection one can bring against the open operation is the possibility of sepsis. This can be avoided with almost absolute certainty, as illustrated by the patient shown, who was operated on without the fingers of the operator going near the wound, only four instruments being used. The entire operation can be performed in fifteen minutes, without any pain whatever, and with the use of one-fourth of a grain of cocain. After incising the skin the blood-clot is washed away by a stream of warm salt solution, the ruptured capsule is picked up and saturated with kangaroo tendon, and the skin incision closed by a subcuticular suture. A posterior splint is then applied and the patient returned to bed. It is not always necessary to enter the general articular cavity of the joint. The posterior reflection of the general synovial membrane is sometimes so high up on the posterior surface of the patella, that the line of fracture is below it, and the general articular cavity escapes. The patient had been operated on four weeks previous to the meeting, and was able to flex his knee-joint nearly to its full limit. In two weeks more it was to be expected that the motion of the joint would be perfect.

Dr. Dawbarn opened the discussion of Dr. Bodine's cases by saying, in regard to extirpation of the jaw, that he differed from Dr. Bodine as to the wisdom of never dressing a face wound, as he thought that an occasional stitch abscess, due to exposure to dust, might be prevented by the use, for instance, of sterile gold-beater's skin courtplaster, one of the best of dressings. Lately he had modified the Ferguson incision in these cases, carrying it distinctly below the orbital plate, as, if carried into or closely below the lid, a certain degree of ectropion will result. The lower the scar, the safer the operation in this respect. He believed in a preliminary operation for control of the external carotid in every severe operation about the face, such as excision of the jaw, and was convinced that many deaths from shock would not occur if this procedure were carried out.

Regarding the fracture of the patella, he said that if it were his own patella, he would not submit to primary suture, but would have it treated by splints. He thought a close fibrous union as satisfactory for practical purposes as bony union, and the element of risk much less, for some slight risk exists, even at the hands of the most rigid aseptician. He differed with Dr. Bodine in regard to the falling downward of the capsule between the bones being the chief cause of non-union. He thought the main obstacle was a bulging forward of the loose synovial membrane between the two fragments. The bones could not unite, of course, through this membrane.

The Chairman, Dr. Burtenshaw, said that he well remembered the first case of fractured patella that came under his care. He brought the two pieces of bone together by means of adhesive plaster applied to the anterior aspect of the leg and thigh, bound the limb to a splint, and kept the patient in bed for the better part of three months. The result was perfectly satisfactory. He thought the danger of infection of the knee-joint by the open method very pronounced, but no greater, in the hands of a competent surgeon than in many other wounds.

Dr. W. H. Lockett said he did not think it best to omit the application of dressings to face wounds. He is in the habit of applying a wet dressing to all primary wounds of this character, not so much for its antiseptic effect as for its mechanical

action in preventing too early sealing of the edges, with consequent accumulation of serum and blood in small pockets, which are favorable points for the growth of bacteria.

With regard to quadriceps muscle, he thought it helped to keep pieces of fractured patella apart, as well as certain tissues both in front of and behind the bone. He had never seen a synovial membrane come between the fragments from behind: in fact, the normal position of the membrane would prohibit this action. An absolutely bloodless field is necessary for a successful outcome of the operation, as one reason for adoption of the open method is to remove the fluid and blood from the sac, and from between the two pieces of bone.

Dr. Alexander Lyle said that he had operated by this method in three cases, and with excellent results in two. In the third, ankylosis of the joint complicated recovery, but this was corrected under general anesthesia.

Dr. Victor Pedersen said that it is a well established fact that there is no synovial membrane behind the patella in the human being. It stops at the margin of the patella, and behind it extends only as a modified membrane. Probably the structure which would interfere most frequently with union of the fragments would be the capsule.

Dr. Bodine closed the discussion by saying that the suggestion of interference with union by the general synovial membrane was entirely new to him, and from his knowledge of the anatomy involved, he did not see how it was possible. He did not think it wise to irrigate the general articular cavity of the joint at time of operation. The irrigation fluid would produce more damage than a moderate amount of blood effusion. It is only necessary to wash out the blood-clot from between the two broken pieces and to suture the capsule. Operations should not be undertaken before the third day following accident, during which time all oozing of blood from the broken surfaces has stopped, and the application of the tourniquet is unnecessary, in fact it is in the way.

ENCEPHLOCELE

Dr. Lyle presented a child, born April 14, 1903, of healthy parents, which at birth had a tumor measuring one inch in diameter by one-half inch in depth above the nose and between the eyes. Through the courtesy of Dr. Whit he was asked to

see the child, and he advised immediate operation. On April 17th, three days after birth, the baby was placed under chloroform narcosis and a longitudinal incision was made over the tumor and the frontal bone. The flaps were retracted, the sac dissected free and the contents easily withdrawn. Two small horns of the sac extended down into the nares. After the dissection was completed, it was found that the absence of bone corresponded in size and shape exactly to that of a silver quarter of a dollar. To cover this opening and to prevent a recurrence of the protrusion a corresponding amount of periosteum was raised from the frontal bone, turned on its pedicle and united with catgut to the margin of the ring. The skin was likewise sutured, a firm compress of gauze applied, and the head bandaged. The result was fairly gratifying, and after a month a truss with double water-pads shaped like the finger tips was made and worn constantly. The present condition of the child is satisfactory. The periosteal flap is becoming more rigid and the bone is filling in, while the child's general mental condition is excellent.

APPENDICITIS WITH COMPLICATIONS.

Dr. L. J. Ladinski showed a girl, 18 years old, on whom he had operated for appendicitis. He said that when he first saw the patient, it was impossible to make a diagnosis. A second examination a few days later revealed the presence of a large fluctuating tumor in the pelvis posterior and adherent to the uterus, but nothing abnormal was found in the ilias fossa. An incision was made in the median line. The tumor was found to consist of a mass of hypertrophied omentum to which a coil of intestine and the inflamed appendix were intimately adherent. In the centre of the mass was a large collection of pus. The tip of the appendix and the coil of the intestine were adherent to the walls of the posterior cul-de-sac, and because of the gangrenous condition of this portion of the gut, about six inches of it were incised and a Murphy button inserted. The appendix was removed and the adherent omentum excised, and the pelvis and abdominal cavity drained from above. The patient made a good recovery after a protracted convalescence. Four weeks after the operation she developed a mastoiditis on the right side and the bone was incised and scraped.

He also presented a patient with a large anterior labial hernia. He said that there are two varieties of labial hernia, the anterior, which is similar to the scrotal hernia in the male, and the posterior in which the hernia descends either in front of or behind the uterus into the vagina and labia. Labial hernia must be differentiated from fibromata, sarcomata, or cysts of the labia.

IMMUNITY.

The paper of the evening was read by Dr. F. M. Jeffries. It was a fifteen minute *resume* of the investigations culminating in our present ideas of immunity. The paper opened with definitions of immunity and infection and then described and classified the varieties of immunity.

After classifying the means by which immunity may be acquired, the speaker proceeded to a discussion of the production of toxins and antitoxins, and the statement was made that when the problem of the production of antitoxin is solved, the problem of immunity will also have been solved. The subjects of hemolysis and bacteriolysis were briefly gone over, and then the two chief theories of immunity were explained, *viz.*, Metchnikoff's theory of phagocytosis and Ehrlich's side-chain theory. It was stated that neither of these theories explains all the phenomena of the subject, although they have each added materially to our proper understanding of the same. Other conditions than those explained in these two theories must be taken into consideration.

The paper closed as follows: "To sum up, the processes of immunity are exceedingly complex, and there is no theory yet advanced which satisfactorily meets the requirements of a thorough explanation. The end is only attained by the activities of all parts of the body, the cells as well as the fluids. Nor must we lose sight of the fact that the bacteria themselves are subject to variation, as an example of which may be cited the colon bacillus, the normal habitat of which the intestinal tract, and which probably has to do with the processes of digestion, yet let the proper conditions be supplied and it gives forth its poison, that is to say, becomes pathogenic; and finally, we know that many of perhaps all bacteria produce in their growth enzymes which are bacteriolytic in themselves." A number of articles in English dealing with the subject were cited.

Dr. Albert Kohn opens the discussion of Dr. Jeffries' paper. He said Metschnikoff studied the white cells. The origin of the work shows how laborious it must have been, and it is wonderful how his theory of phagocytosis was gained on a theoretical basis, working on the lower organism. He studied the exoderm, the endoderm and the mesoderm; the workings of this layer were to a certain extent of the same nature as those of the endoderm, that is, of a digestive type. He then began to prove his conclusions on marine animals, inserting foreign bodies in order to see what the action would be. He found that irritation was caused by what seemed to be attempts at digestion. Later, he modified his primary conclusions that the phagocytes were the only bodies concerned in the digestion of the bacteria and their toxins. His theory was accepted until Bouchard brought forward the theory that it is not the phagocytes that digest the live bacteria; that after their destruction they carried away their dead bodies.

As to the question of susceptibility, according to Ehrlich, all consideration of such outside factors as hygiene, traumatism, etc., must be omitted. If we have receptors which in the one set of cells will unite with certain parts of the toxins, the haptophorus atoms, these receptors already exist, and they cannot be influenced by traumatism, hygiene, etc., unless the receptors are changed, decreased or increased by those outside factors. The fact that the alexin bodies can be destroyed by heat, a fresh supply of sear added, and the properties of the alexin bodies return proves that the heat destroys the alexin.

Dr. James J. Walsh said that the subject of immunity was usually considered very complex. In reality, however, it is not more involved or inexplicable than is the simple matter of solutions. We pour sugar into water until it will not receive any more, but the same water will then take up a large amount of salt, and after it has become saturated with salt it will take up various other substances. A child suffers from scarlet fever, and will not take the disease any more, but will if exposed, take mumps or measles. It is as if the cells become saturated with the toxins of one disease after another. The first step in immunity, as regards our modern knowledge of the subject, was taken by Pasteur when he demonstrated that chickens at the normal temperature would not contract anthrax, though if

their temperatures were reduced to that of the animal in man, they were liable to anthrax. The six or eight degrees of higher temperature produced a natural immunity to the disease. In the light of Ehrlich's theory of immunity depending on the number of side chains or cells, one is tempted to wonder whether more side chains exist at the higher than at the lower temperature, and whether a chicken's immunity could be destroyed by a series of changes of temperature. As a matter of fact, Ehrlich's and Metschnikoff's theories are not so far apart as has often been thought. The protective substances in the blood and cells, according to Ehrlich's theory may well be supplied by the activity of the phagocytes.

The first immunizing process ever invented was Jenner's vaccination. During the past week Dr. Walsh said that he had been with Dr. Calkins of Columbia University, who has been working on the protozoon supposed to cause smallpox. This protozoon occurs also in vaccinia. In the case of vaccination however, the parasites invade only the cell bodies, while in smallpox they invade the nuclei of the cells, grow much more luxuriantly, and after a time invade the whole body, thus producing a generalized septic condition. In recent years we have come to realize as the result of studies in immunity, that babies who are fed on mother's milk are better protected against contagious diseases than are those artificially fed. The principle reason for this is that most mothers have had the ordinary diseases of childhood and enjoy immunity from them. Immunizing substances occur in their milk and are transferred to the child during the nursing. This constitutes another reason why mothers should be encouraged to nurse their offspring and not allowed to neglect this sacred duty, unless there is some absolutely necessary reason.

The American Electro-Therapeutic Association will hold its fourteenth annual convention at St. Louis, Sept. 13, 14, 15, and 16, 1904. The scientific sessions will be held only in the mornings, whereby the members will be afforded an opportunity of visiting the various attractions of the exposition during the afternoon.

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Editor and Proprietor.

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EDITORIAL DEPARTMENT.

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EDITORIAL.

THAT LIVER.

There is no doubt that the liver performs one of the most important functions in the human organism. Nor can there be any question that it is, pathologically, as important and possesses an amount of interest of no mean order. But it is not of its physiologic or pathologic points of interest that we intend to speak, but rather of its sociologic and economic aspects. We daily meet with individuals who are affected with a mild degree of hypochondriasis, and they attribute all their real and imaginary ills to the liver. A syphilographer of eminence taught his pupils that when they had cases with obscure symptoms, so clouded that no reasonable cause could be found for them, it was safe practice to treat the subjects for syphilis—and his advice was correct. Following the same train of thought, there seems to be a certain amount of predilection now-a-days to treat the majority of patients for disturbed livers, and they in turn learn to attribute their ailments to that liver.

This viscus has been made the universal scapegoat, and, right or wrong, it must be harassed by both its possessor and by the medical practitioner. In fact, that liver is the target at which everyone hurls his missiles, and we somewhat wonder if it is not finally destined to completely disappear, and give future generations of livers a rest. As matters now are, that liver does not seem to have the ghost of a chance to enjoy its well-earned innocuous desuetude, and there seems to exist no rational basis upon which to found such a hope. The influence of this forced activity from a sociologic point of view is of the most important. Its effect upon the arts is daily seen in its manifestations. We have presented to us in music, impossible themes, written in frightful time, and accentuated by cords of a tone and color of the most lurid character. In painting, we are presented with monochromes of the most intricate character, which only one versed in such things can interpret, and in literature we are treated to reading matter which not even the author can explain or render lucid. Some will ask what the cause of such strange things can be. It is simply that liver. It makes all its victims see everything of a gamboge tint, and decorative art assumes a "greenery yallery" color.

From an economic point of view the liver has played a most important part. It has been the means whereby fortunes have been made by many individuals. They have recognized, and fully appreciated the complaints made by querulous humanity, which attributed all its ills to that liver, and the demand thus indirectly and darkly hinted at has been promptly met with the desired supply. Forthwith appeared Dr. Skinkum's Liver Regulator, warranted to cure anything in the liver line, and all the real and imaginary ills depending upon a liver whose main-spring has been sprung. This harping upon the liver is one of the long suits of the patent medicine man. He is very successful in his appeals to the common herd; his illustrations of before and after taking are both striking and weird, and the former strikes terror to the heart of the intended victim. The reading matter does credit to the imagination of its writer, and shows his intimate knowledge of the foibles and follies of ordinary mankind. In fact, as an artistic piece of literary construction it could serve as a model. At every turn we have horripilating descriptions of the evils which are wrought by that

liver. Those who never knew that they possessed such an organ, immediately experience all the symptoms caused by an impaired hepatic organ. Forthwith they become steady customers and purchasers of liver regulators, liver pills, and of the entire series of hepatic disturbers, which are concocted and marked by the patent medicine manufacturer. However, there is money in it, and that is all the inducement that this conscienceless gentry needs to palm off trash upon a credulous public.

Matters have come to such a pass, that an honest physician who diagnosis a liver trouble is laughed at, scoffed, and jeered, and he has that liver thrown back at his face. The swing of the pendulum has gone to the opposite extreme in many cases, but the majority still hang on to the liver trouble with a little variation now and then directed to the appendix. People still inquire of physicians in regard to the side on which that liver is located, and it is destined to hold sway over the public mind for many years to come.

Menstrual Epilepsy Treated by Ovarian Transplantation.—

M. Brennan reports the case of a girl of nineteen years, who for three years had attacks of epilepsy at or near her menstrual periods. No leison of any kind was discovered. No form of medical treatment succeeded in overcoming the difficulty. It was finally decided to operate; the uterus was found to be normal, the ovaries, also, with the exception that they were somewhat cystic. The ovaries were removed, and a portion of one of them, as large as a bean, deposited in a cavity prepared to receive it on the fundus uteri, and uterine tissue brought together around it. The patient made a good recovery, has menstruated but once, eight weeks after the operation, and has had only a few very slight nervous attacks, and these only following special overexertion. The improvement is so great that there is every reason to hope for a complete cure.—*Med. Record.*

BOOK REVIEWS.

THE MEDICAL EPITOME SERIES.

Organic and Physiologic Chemistry. A Manual for Students and Practitioners, By ALEXIUS MCGLANNAN, M.D. Series edited by V. C. PEDERSEN, A.M., M.D. 12mo. pp. 246. Illustrated with Nine Engravings. [Philadelphia and New York: Lea Brothers & Co. 1903. Price, \$1.00.

The present number of Lea's Epitome Series is a most excellent one, and particularly valuable to medical students and practitioners, in view of the fact that it is devoted to organic and physiologic chemistry, two branches which are but too much neglected by the medical profession in general. The author deserves much credit for the very clear and easily understood manner in which he has written the book, and he is to be further commended upon the fact that he has thoroughly covered his subject. These qualities should certainly recommend his little manual, not only to those for whom it is intended, but to teachers as well. We have been very favorably impressed by it, and we have no doubt that others will have the same opinion directly they make a careful examination of its contents. The author is thoroughly conversant with his subject, and we are sure that a careful study of the pages of this epitome will give a good working knowledge of the subjects with which it deals.

The Practitioner's Guide to the Diagnosis and Treatment of Diseases of Women. By DR. GUSTAVUS M. BLECH. 8vo. pp. 112. Illustrated. [Chicago: M. Robertson & Co. 1903.

This first attempt of the author to write a book is very creditable indeed. Of course it is not a treatise, nor is any attempt made to cover the entire subject as is done in the larger and more ambitious works. The author has merely endeavored to give instruction on those points in which most practitioners fail, and he has certainly most successfully done this. We do not propose to offer any criticisms beyond the one that the book should have been made larger, and it would have been better to add a number of illustrations of conditions to which allusions are made. The style is short and positive, all discursive writing having been avoided and discussions omitted. These are two points which will be much appreciated by the reader. We are anxious to see the author's work on sterility, whose future appearance he foreshadows.

Transactions of the National Association of United States Pension Examining Surgeons. Second Annual Meeting, Washington, D.C., May 13th & 14th, 1903. Including an

Account of First Meeting, at Saratoga Springs, June 9th, 1902. Vol. I. 8vo. pp. 215. [Published by the Association. 1903.

We have been much pleased to receive these Transactions, as they furnish us with evidence of the interest that Pension Examiners are taking in their work of seeing that no unworthy case is permitted to draw a pension from the Government. In the volume before us are given some very well written as well as considered papers by very capable members of this Association. The great interest taken in it is evidenced by the fact that the attendance has grown, and it promises to become still greater at the next meeting, which will be the third, and will be held at such time and place as the Secretary may designate in his next call. There being no mention of this in this volume of Transactions, there is no doubt that such notice will be forthcoming in the near future.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

The Practitioner's Guide to the Diagnosis and Treatment of Diseases of Women. By Dr. Gustavus M. Blech. 8vo. pp. 112. Illustrated. [Chicago: M. Robertson & Co. 1903.

Transactions of the National Association of United States Pension Examining Surgeons. Second Annual Meeting, Washington, D.C., May 13th & 14th, 1903. Including an Account of First Meeting, at Saratoga Springs, June 9th, 1902. Vol. I. 8vo. pp. 215. [Published by the Association. 1903.

THE MEDICAL EPITOME SERIES.

Organic and Physiologic Chemistry. A manual for Students and Practitioners. By Alexius McGlannan, M.D. Series edited by V. C. Pedersen, A.M., M.D. 12mo. pp. 246. Illustrated with nine engravings. [Philadelphia and New York: Lea Brothers & Co. 1903. Price \$1.00

The Polyclinic, published in London, is the Journal of the Medical Graduates College, London, and begins its eighth volume with the January issue. It still remains monthly, but has changed its form from an octavo to a small quarto. The January issue contains but fourteen pages, but will no doubt soon increase in size to one more nearly approaching to that it formerly had.

The Albany Medical Annals has made its January issue of the current year a jubilee number in honor of its twenty-fifth year of publication. It has been made what the Germans denominate a *Fest Schrift*, and it contains 208 pages full of especially prepared articles by members of the faculty of the Albany Medical College, whose Alumni Association issues the *Annals*. We desire to congratulate not only the editor, but all the gentlemen who took part in the issue of this truly royal number.

The Criterion has appeared with its January issue more interesting than ever. It is replete with good reading matter, and those who have become accustomed to this sterling publication look to the receipt of each succeeding issue with more than ordinary expectancy. In the January number we are given, among other things, another of his characteristic Kentucky stories by John Uhri Lloyd, who has made for himself a reputation second to none, as a delineator of a certain phase of Southern life. The *Criterion* continues to be published at \$1.00 a year, with its office at 156 Fifth St., New York City.

The Daily Medical we are informed by the publishers, will appear Feb. 1, and continue to do so every day with the exception of Sunday. It will vary in size from four to eight pages daily. It will be issued in New York City, and its publishers have great hopes of making it a permanent success. We have made arrangements whereby our paid up subscribers can have the *Daily Medical* for a year at the subscription price of \$1.00 in advance, if sent to us. Those not already subscribers to the JOURNAL may obtain it and the *Daily Medical* by sending us \$2.00 for a year's subscription to both.

The Medical Brief has issued a handsome Souvenir to its friends and contributors in the shape of an octavo, containing well executed half-tones of its contributors during the year 1903. The first portrait given is that of Dr. J. J. Lawrence, the proprietor of the *Brief*. Facing each portrait is a photo-engraving of the beginning of that author's contributions, taken direct from the pages of that journal. The idea is a new one, and this memento will be kept by all those who receive one, as it is gotten up in handsome style with an embossed cover, the lettering being in gold with white flowers on a brown background.

The Journal of Cutaneous Diseases, including Syphilis, has been without doubt, phenomenally successful during the past year in maintaining the high standards which the new management have set for it. The last issue, for January 1904, shows us that not only has this been continued, but additional improvements have been made. The *Journal* is larger to-day than

it ever was, and contains articles in every way of a superior order. No progressive physician can afford to have his name not appear upon its subscription list. It is a publication of high standing, and among its distinctive features are the transactions of the Dermatological Societies in New York, Chicago, and Boston, and also of the annual meeting of the American Dermatological Association. The subscription price is now \$4.00 a year, which is very cheap, when the size of the *Journal* is taken into consideration. We certainly are not acquainted with a journal devoted to cutaneous medicine and surgery, and to syphilis, which is its superior.

MELANGE.

In Memoriam, William Matthew Warren.—In loving memory of a beautiful and beneficent life, we, the assembled directors, executives and employees of Parke, Davis & Company, would fain express the sorrow and heartache caused by the untimely death of our General Manager, William M. Warren. For the relief of our own grief, as a just tribute to a life rich in effective performance, and in deference to the sentiments of a wide circle of surviving friends, we record this testimony to the noble character, the massive and solid integrity, the large, warm, generous heart, the brilliant and gifted mind, the abounding energy of our beloved friend. As long as life and memory may linger in our mortal frames we shall cherish the recollection of his lofty spirit and winning manners—simple, sweet and genial. The benevolence of his heart shone out in the engaging smile, in the keen and penetrating yet kindly eye, which gained for him a friend in every acquaintance. No man ever lived whose granite-like probity inspired quicker or more lasting trust. To know William M. Warren was to like him; to know him well was to love him and trust him to the gates of death. And what living creature ever trusted him in vain? His simple word was a tower of strength. When did he ever fail in the whole span of his short but shining life to fulfill his plighted faith with a chastity of honor that knew no stain—nay, when did he fail to beggar his promise by the opulence of his per-

formance? Gifted he was, but his strength lay as much in moral weight as in mental endowment, and his remarkable success was only the destiny of character.

Mr. Warren won many of the great prizes of life—high position, wealth, influence, popularity, business success,—but he never paid any of their tragic penalties. His temper remained sweet, his faith in men unimpaired, his honor unsoiled, his love of humankind unchilled.

It would hardly be fitting at this time to give more than a passing glance at Mr. Warren's beautiful devotion to wife and orphaned child, to parents and sisters. He rose to the full height of all domestic duties: to him, indeed, they were not duties, but joys, for he cherished tenderly every family tie, and he could not draw a cheerful breath until those dearest to him shared in the rich happiness of his young and radiant life.

Mr. Warren had barely crossed the threshold of his fortieth year. Entering the service of Parke, Davis & Company when a lad of seventeen, he rose steadily through its various grades until at thirty-two he filled the highest place in the gift of the House, that of General Manager. At his death his administration was seven years old almost to a day. Its wonderful success has been manifested in a rapid and unceasing increase of the business; in the multiplication of our laboratories and branch houses; in the erection of new buildings, acre after acre; in the successful invasion of foreign markets and new fields of scientific enterprise; in heightened prestige; in the formation of a remarkable corps of veteran executives animated by the principles of their leader and trained to perpetuate his policies. No ambitious merchant could wish a nobler monument than the contributions made by William M. Warren to the power and growth of the great enterprise whose progress was the blood in his veins and the breath in his lungs! The secret of his brilliant career was threefold. He knew how, and loved to discover talent. Into the hands of dozens of obscure and untried men he put the key of opportunity. Wholly free from national antipathy, race prejudice, or social narrowness, he measured his lieutenants by the single standard of ability to produce results. As an organizer, as a co-ordinator and manager of men, his rare gifts would have brought him fame in public life. He had an eagle's eye for opportunity and an

insatiable appetite for fresh enterprise in fields that remain unperceived by the dull vision of the mediocre. In the arts of mercantile construction he was a gifted architect; and to build, to build, was the darling occupation of his bold and aspiring mind. Every actuality, every present-day condition that could affect the welfare of this House was the object of his assiduous study; but his also was the rarer power to connect the present with the distant future by new lines of policy. He had the statesman's instinct for tendencies as well as realities; and when the tendency of to-day became the fact of to-morrow it found him armed and prepared. With the magnanimity of a true leader, he feared no rivals, he reared and trained his own successors that his life-work might survive its author, that the House to which his labour was dedicated might thrive and prosper during the generations to come. Fidelity to a trust receives its supreme, its heroic expression when the Trustee strives to make himself dispensable.

Oh, beloved friend of happy days, partner of our triumphs, architect of our success, may thy serene spirit remain an invisible presence in our lives and comfort our aching hearts. May the sweetness, the strength, the wisdom, the genial cheer of thy young life be distilled upon our souls and sustain us in the task which thou has forever resigned. May thy great, large-minded thoughts be breathed into our toil: may they help us dedicate our lives and our labors to a solemn work which touches the very nerve of pain and human suffering. In our feebleness we could not abridge thine ailment or prolong thy days: may it be given us to cherish, to preserve, and to augment thy handiwork!

The Gera Contract Practice Trouble.—The latest phase is that the sickness insurance societies refuse to pay their whilom medical officers for the last quarter of the year for which they served, claiming that they should be made to pay for the expenses caused the society by their resignations. The physicians have appealed to the courts.—*Journal A. M. A.*

MISCELLANEOUS NOTES.

Pleurisy.—Dr. Colin Campbell, Southport. Eng., L.C.R.P., M.C.R.S., writes in the *Medical Press and Circular*, London, Eng., Oct. 7th, 1903:—

Dr. B. was under my care last winter suffering from a pulmonary cavity. He had had previously two or three intercurrent attacks of pleurisy, which I again found present on Dec. 7th, 1902, accompanied by severe pain over the cavity, and a temperature of 103°. His previous attacks had occurred at his home, where careful poulticing was practicable, but in apartments this was unsatisfactory, and so it occurred to me to try Antiphlogistine.

The material was warmed and "trowelled" on for many inches around the pleuritic centre, then covered with non-absorbent lint and Jaconet.

The result was remarkable; the pain disappeared within an hour, and the high temperature within two days.

Many advantages over poulticing were noticed by the patient; facility of application, no unendurable heat, rapid relief from pain, its adhesiveness rendered movement possible without tight bandaging or the alternative sudden influx of cold air which follows the separation of a poultice from the skin.

Chilblains to many will appear a trifling matter, but as one whose school days in winter were rendered miserable by them, I can assert that they are most maddening. Last winter my daughter, age 11, suffered from them severely. Each time Antiphlogistine was applied, the redness and intolerable itching disappeared in a night. I have tried remedies innumerable with no such result.

"Many a man is today worrying over a case or two of Pneumonia, Pleurisy, or Capillary Bronchitis, whose troubles would flit away like mist did he but know enough to put his patient into a jacket of Antiphlogistine."—*Medical Summary*, Nov. 1902.

I have used more or less of the two elegant preparations, Peacock's Bromides and Chionia during the last two or three years and must say with very satisfactory results.

Mitchell, S. D.

B. A. BOBB, M.D.

I have used Seng and Cactina Pillets in my practice and find that they are all that has been claimed for them. Seng is excellent in those forms of indigestion following chronic catarrh of the stomach and bowels. I like the effect of Cactina Pillets in weak heart. I have used it for the last seven years.

A. M. ARMSTRONG, M.D.

Crawford, Tex.

Febrisol Liquid (Tilden's) an Ideal Remedy.—Is it not true that nine-tenths of the cases of illness coming under the care of a physician are characterized by fever and pain? Is it therefore not obvious that much of the success that comes to medical men is owing to the more or less prompt relief given to these conditions? From this standpoint Febrisol Liquid (Tilden's) should command the special respect of the medical profession as a certain means of making friends, money and reputation. Febrisol Liquid accomplishes these results because of its antipyretic, antiphlogistic and analgesic action, which is

unattended with depressant effects. And most important to observe, it causes no drug habit, and does not like Opium wreck the patient's mind while he is made oblivious of pain. Febrisol Liquid relieves the pain by reducing the inflammation which is the cause thereof. It sets the circulation at rest by calming the nerve centres in the medulla and through its influence upon the vaso-motor nerves it opens the flood gates of the skin producing gentle perspiration and thus cools the blood.

Experience amply shows that there is no more safe, efficient, thoroughly reliable remedy in such conditions than Febrisol Liquid (Tilden's).

Sanmetto Incomparable in Inflammatory Conditions of the Urinary Tract.—I have used Sametto in the various inflammatory conditions of the urinary tract—especially in acute cystitis and prostatitis—with good results. Other preparations on the market that are said to be the same thing are not to be compared with Sanmetto. Shelbyville, Ind.

H. E. PHARES, M.D.

The Coca Plant.—Coca is the leaf of an Erythroxylon shrub indigenous to equatorial America, employed during many hundreds of years, empirically, as a sustainer and restorer of muscular force.

There are several varieties of Coca, among which the aromatic or "sweet" leaf contains little if any cocaine, and is the only kind used by the natives. This is the Classic Coca to which phenomenal properties are ascribed. The "bitter" leaf which they reject, is exclusively employed for cocaine extraction. Even since the popular introduction of cocaine, the natives will not use that alkaloid which creates excitement without sustaining muscular power. Thus it is shown, even empirically, that the properties of True Coca cannot be substituted by cocaine. A fact upon which all observers agree, but which is not yet generally recognized.

Mariani, of Paris, was the first to introduce Coca in available form; he recognized nearly half a century ago the great difference in Coca leaves, and by special blending of the sweet leaves, carefully treated in nutritious French wine, produced his unequaled neuro-muscular stimulant, which, as a trustworthy preparation, has won high standing in the profession abroad and in this country by all practitioners who have subjected it to test.

The Physicians Defence Company seems to have come to stay. Its home office is in Fort Wayne, Ind., and it has a record of which it may well be proud. It is the only company that makes a speciality of defending physicians who are sued for malpractice. It has no other functions and it is the only company in the United States that has made this a speciality. That the services rendered are of the best, goes without saying. Every physician knows that a specialist is better in his chosen field than the mere rank and file. It is the same with this particular phase of legal work. A physician's *liability* policy as its title implies, is a bait because any shyster lawyer is attracted by the prospect, not of getting money out of the physician, but of the company who will advance it for him. On this account it cannot be said to be as advantageous as to have a company which will see to it that a physician wrongfully accused of malpractice is honorably exonerated. We will have occasion to recur to the subject in the future. Meanwhile every physician of any standing in his community should avail himself of the opportunity of entering into a contract with the Physicians Defense Company, said contract costing but twenty dollars a year. The general agent of the company at St. Louis is D. H. Bixler, 314-315 De Soto Building.

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ORIGINAL COMMUNICATIONS.

SCANDALS AT THE LEPER SETTLEMENT OF MOLOKAI.

BY A. S. ASHMEAD, M.D., NEW YORK.

(Concluded)

In an article which will shortly be published by the *American Journal of Dermatology*, entitled "Fish ponds in Hawaii as Propagators of Leprosy," I have thoroughly gone into the question of mosquito and fish transmission of leper-germs, by intermediary host function as it relates to the conditions of Hawaii. A copy of this publication will be sent to the Hon. Secretary of the Interior.

In Hawaii there is an immense acreage of these fish ponds, mosquito breeding places. Many of them were built by the kings and chiefs 250 years ago when fish and sharks were worshipped by the natives. These ponds are found principally in the bays indenting the shores of the islands; and usually were built with lava rock. Most of the Molokai fish ponds were thus built. A few were constructed somewhat interior, and these are filled by the fresh water streams from the mountains, or by tidal water from the sea. These sea ponds usually contain the "Amaama" or mullet, and the "Awa" fish. In the fresh and brackish water ponds the imported gold-fish (from leprous China and Japan), the China fish, "Oopu", Carp and other food fishes, species of the Mullet, of Hawaiiis are cultivated. Besides, the fish which come in through the open gates, the owner usually has men engaged at certain seasons of the year in catching young Amaama (mullet), and Awa in the open sea and bays, and transporting them alive to these fish ponds. Without mentioning the other islands of the Hawaiian group, I will only say here, that the acreage of fish ponds in Oahu is

3643 acres, that of Molokai amounts to 1205 acres, in Kauai there are seven ponds, whose acreage is not given, in Maui where sheep raising is the main industry, there are only 51 acres, and in Hawaii 113 acres. The total catch of Amaama fish (mullet) in Molokai ponds was 92,000 pounds, besides other species of mullet. The island of Oahu has 74 fish ponds, Molokai comes second with 15, with a total investment in Molokai in them of \$11,709. The total investment for all the islands is \$168,943. The total-fish pond catch for Oahu was 560,283 pounds, valued at \$139,714, Molokais 92,000 pounds of mullet valued at \$22,980. The fish-pond catch for all the islands was 682,464 pounds, of which the Amaama or mullet comprised 485,531 pounds. This disposes of Mr. McVeigh's statement that "Mullet are not deep water fish, and are practically not known at the Leper Settlement as the water near the shore is hundreds of fathoms deep."

The Amaama is one of the fish usually salted down, and kept for a long time.

At present but little deep sea fishing is done by the fishermen. Formerly natives did all this fishing, but the Japanese now monopolize it. Some of the best grounds are off the coast of Molokai, and quite a fleet of Japanese boats from Honolulu resort to them.

"The sea ponds usually contain only the Amaama (mullet) and the Awa. In the fresh water ponds, gold-fish, opai carp, aholehole, and okuhekuhe are kept." (Report of U. S. Commission for investigation of Fishes and Fisheries of Hawaiian Islands, 1902.)

Mr. McVeigh would have us believe that very few lepers at Molokai have diseased hands, and therefore it is not a danger to the general health of the community, to have them handle fish intended for the healthy population. For he says: "Many of the lepers are but slightly tainted, the disease takes on many different forms, and is often on the clothed portions of the parties only, and but slightly marked. Many lepers are very strong and vigorous, etc."

Governor Dole himself has testified before the Senatorial Investigation Sub-committee: "The Hawaiians eat out of the same poi bowl with their fingers, they are constantly kissing each other." Hon. Wm. O. Smith, ex-president of the

Board of Health testified: "Generally the fingers drop off; I have seen a man living with both feet and both hands gone. Some are extremely repulsive." Mr. McVeigh also testified that "168 lepers were helpless." He said, as to the degrees in the way in which these people are affected; "Some are a good deal worse than others; tubercular cases are the worst; they have sores on the body, face and hands, and on the feet."

Dr. Alvarez, in his report to the President of the Board of Health, Honolulu, advised that "a sight of so many distorted forms and faces might serve to awaken in the minds of visitors a wholesome dread of the disease, and rouse them to the necessity of protecting themselves."

Now, according to Dr. Mouritz, of Mapulehu, Molokai, of 652 lepers of Molokai, 333 were tubercular, the type with sores, and 204 were anesthetic, or nerve leprosy, while 115 were of mixed type. Therefore, the point made by Mr. McVeigh against my contention, that leprous hands and feet are dangerous contact to food intended for the healthy, is not well taken.

As to fish being proper food for lepers when substituted "in lieu of meat ration," and that "one pint to two quarts of milk per day is sufficient food for lepers," I have only to quote the causes of death of lepers to prove the fallacy of it. Here is a recorded death list of Molokai lepers: "Exhaustion, consumption, diarrhea, tuberculosis, pneumonia, chronic pneumonia, leprosy gangrene, pyemia, leprosy nephritis (kidney disease), leprosy phthisis, gangrene, phthisis pulmonalis, leprous exhaustion, pyemic leprous exhaustion, consumption, etc." All these are conditions requiring *much* meat juice and pure milk.

Dr. Cooper, President of the Hawaiian Board of Health, not only states that "from one pint to two quarts of milk daily is allowed each leprous patient at the Molokai leper settlement," but, he further says: "The settlement has a large dairy, at present milking ninety cows."

I beg to say, in reply to this, that according to the testimony of those in authority at the settlement, as given to the Sub-committee of Investigation of the U. S. Senate in 1902, there were 1009 patients at Molokai. And Rev. Father Mulhaus wrote me, January 26, 1903: "A recent letter from Molokai says that there are at present about 870 lepers. Isola-

tion is doing its work; in 1890 there were 1,213, in 1897, 1,100 of these unfortunates."

Besides this evidence as to the population of the settlement, the statistics given by the Governor's annual report to the Secretary of the Interior show that "from 1891 to 1900 the average number of lepers was 1,096, and of deaths, 134.5."

Judge Humphreys has stated that on September 9, 1902, the population of the leper settlement was as follows: Lepers, 858; kokuas (attendants), 58; non-leprous children (who, according to the Superintendent, were 50 per cent of them illegitimate), 75; other well persons, 16. Total of persons living at the settlement, 1,007.

Now, may I ask Dr. Cooper, how he makes ninety cows (Hawaiian cows, on poor pasture) give milk enough to supply all these people with milk, or even the lowest number given of the lepers with "from one pint to two quarts a day?" When we consider that in summer time the Board of Health turns these cows into the "taro" patches (to which the lepers strongly objected), and that this "taro," unless plenty of water is supplied to it, will not grow well (and complaint was made that this could not be done), we conclude that the Hawaiian cows must be in too poor condition to give much milk.

Let us say, then, that, at the outside, each cow gives ten quarts of milk a day, which I very much doubt is the case, and that all of them are "fresh" the whole year round, which would be an impossibility, even thus it would not allow "from one pint to two quarts" of milk daily to each leper. Nor does the published ration table of the leper settlement even mention milk as a regular diet for lepers.

To arrive at some positive conclusion about this matter, I addressed a letter of inquiry to the superintendent of Briar Cliffs farm, up the Hudson river, whose cows give milk that is in much favor with the medical profession of New York City. These cows are superior cows, probably far better milkers than those of Molokai, Hawaii. Mr. Jesse Coddington, the superintendent of the farm, writes me Dec. 14, as follows:

"Yours of the 10th inst. at hand. In regard to cows, you would have to expect about one-fifth of your cows to be 'dry' all the year round. The rest of them, if well cared for, would

average about eight quarts of milk per day, which would mean less than six hundred quarts per day for ninety cows, and that, I think, is a very good average. I shall be glad to favor you with any other information that I may be able to give.

(Signed) JESSE CODDINGTON,
Superintendent."

I also wrote to Dr. Edward F. Brush, the famous kumyss manufacturer of Mount Vernon, New York. Here is his reply, dated Dec. 17th:

"Replying to your letter of Dec. 10th, I cannot give you definite answers, only approximate. Of course, it largely depends on the variety of cow and the help. Ordinarily a herd of cows ought to average 10 quarts per cow—that is, with 90 in the herd, under good management, there should be about 900 quarts of milk per day, and there should be about ten cows out of commission most of the time—that is, dry cows about to calve. I hope I have made this satisfactory, with the understanding that, of course, nobody could make an exact answer to your questions.

(Signed) E. F. BRUSH.

(Dr. Brush has a magnificent herd of high-bred cows.)

I fear, therefore, that Dr. Cooper, President of the Hawaiian Board of Health, has exaggerated on this matter to meet the exigency of the criticisms contained in my former letter to you, Mr. President—"that meat and milk are neglected by the Hawaiian Board of Health as food for lepers."

May I say here, further, that in 1866 there were 155 lepers out of a population of 60,000 Hawaiians: one leper for 387 Hawaiians. Now there are, counting those not kept at Molokai, 1,650 lepers, out of a population of 30,000 Hawaiians, or one leper in every 19 Hawaiians. Dr. Alvarez says: "This is not in accord with the statement that we have nearly succeeded in stamping out leprosy among our people."

Dr. Morrow, a high New York authority on leprosy says: "Segregation of leprosy in Hawaii is a failure, the disease there is on the increase." Dr. J. Ashburton Thompson, Chief Medical Officer, Sydney, New South Wales, who has made the best analysis of Hawaiian leprosy says: "The outbreak of leprosy in Hawaii is not declining."

Dr. Souton, of Paris, a noted leprosy expert, left Hawaii "very much disappointed" with the way the law of segregation was being carried out. He criticized "the lack of *Medical* treatment for leprosy" in the following words: "No attention

is paid to the treatment of leprosy; there is a physician at Kalawao, but his time is taken up with treating accidental maladies." He concludes as follows: "The government spends a considerable sum every year to maintain the two villages of Molokai (Kalawao and Kalaupapa). Every leper costs 450 francs a year, thus imposing an appropriation of 500,000 francs. If we admire this generosity, we cannot help regretting the form under which it is applied, and the insufficiency of the results obtained."

Dr. Alvarez, of Honolulu says, "that the suspects or lepers live in every district of these islands. Honolulu itself contains a large number of them, and in his opinion they are the most potent factor in continuing the spread of the disease, thus nullifying the salutary effects of segregation."

The true fact is that leprosy in Hawaii, under the inefficient local government is being eradicated *naturally*, in spite of the authorities, by the death of the race. When all the Hawaiians are dead, then there will be, of course no Hawaiian leprosy. Will Governor Dole and his laudators then claim that they have conquered this disease? Our Government at Washington should at once assume full charge of this important problem, by putting the leper settlement of Molokai in the scientific hands of educated physicians like those of the United States Public Health and Marine Hospital Service.

The Local Government rations allowed the lepers per week is given in the report of the Investigating Committee of U. S. Senate last year, as follows: Beef, seven pounds; Salmon, five pounds; fresh fish, seven pounds; "pai-ai," a native food prepared from the root of *Colocasia esculenta* often called "poi"; one bundle or twenty-one pounds ("Taro"); rice nine pounds, with one pound of sugar along with it; bread, eight and a half pounds, *with one pound of sugar along with it*; flour, twelve pounds, *with one pound of sugar along with it*. When fish, therefore, caught by the lepers was substituted for their meat ration, their diet became all fish excepting vegetables, starches, and sugar, and thus a great wrong was done to the lepers.

In the report of the U. S. Senatorial Sub-committee on leprosy in the Hawaiian Islands, (and Porto Rico), composed of Senators John H. Mitchell, of Oregon, (whose State ships salmon to Hawaii); Jos. R. Burton, of Kansas; Addison G.

Foster, of Washington, (whose State ships salmon to Hawaii); and J. C. S. Blackburn, of Kentucky. I read: Hon. "W. O. Smith, Ex-President of the Hawaiian Board of Health, testified that in his opinion, leprosy was contagious by inoculation, rather than by heredity or contagions proper." Mr. Wilcox testified that an Investigating Committee of the Hawaiian Legislative found that a store was run at Molokai, where rotten salmon, rotten bread, rotten clothes were sold, and the Board of Health "made ten per cent. out of it." Cross-examined by Judge Humphreys, he said, that the "Board of Health run this store over at Molokai so that certain merchants could unload on the lepers their shelf-worn goods, and that he knew some members of the Board of Health who do this, that is send up bad things to the poor lepers and charge full prices for them." George Markham testified that Mikila, a leper, "was thrown into Kalaupapa prison because he stole a sheep or a goat (to eat?) where he died in a dungeon literally covered with maggots." Senator Mitchell asked this witness: "Are lepers not properly treated?" and Mr. Markham answered: "They have salmon that is not fit to eat." The lepers of Kalaupapa and Kalawao petitioned the Legislature, "that the Board of Health be prohibited from claiming any share in the "taro" produced on the farm of Waikolu. Superintendent Reynolds testified that, plenty of "taro" used to be *tabu* for the lepers, when Waikolu was used for keeping the stock of the Board of Health during the dry season. These "taro" patches had to be fenced in to keep out the wild pigs and wild hogs of the valleys. The lepers were allowed to go into the patches, and help themselves. The "taro" was used by the lepers in making their favorite dish, "poi." Senator Baldwin (Hawaii) asked whether they sold it to the Board of Health, and Superintendent Reynolds answered that, "What is raised in other places than Waikolu, such as Wailua for instance they *can sell themselves*, but all the Waikolu "taro" must be delivered to the Board of Health. Sixteen thousand dollars worth was raised in one year by seventeen of the "taro" planters. Assistant Superintendent Feary was severely criticized by the lepers at Molokai for various harsh treatments. Keha, a leper, said that: "If the Board of Health repaired his house, even by putting one shingle on it, at his death the home goes to them, and his wife and child would have no

claim on it, the Board of Health takes it all." Mr. Notley testified that: "He was forty-two years old, married, and was a leper. He had resources outside of the Board of Health appropriation. He had also daily work, being interested in the coffee shop business." "To what extent is the coffee shop patronized in the community? Do many Hawaiians patronize a place of that character (run by a leper)?" were asked. He answered: "Yes." "What is the average attendance daily?" Answer: "According to the state of the weather; twenty or thirty at a time will come," His income was \$200 a month. "In running a coffee shop do you pay a license?" Answer: "No, it seems the control of the license is in the Board of Health, I pay no license." He charged that a lot of beer making and "Swipe" drinking was the greatest cause for disturbances among the population. "Swipe" is made out of *Sugar* and hops, and a lot of things a good man would not touch. Gin, alcohol, and "papai-ai" chopped up are mixed with the "swipes"; "ti" root, and pine-apples are also used in making strong drink. *The excess of ration of sugar* is used by lepers in making strong drink of, and they buy *smuggled* hops. Besides there are many great "awa" drinkers.

Another leper testified that: "here in the settlement are lepers selling 'awa.' Persons addicted to the 'awa' habit buy it at a high price. The man who had the 'awa' license for the island of Molokai used to send us 'four stumps' for a dollar, which would last us four full days, that would give us four nights of joy (drunkenness). Now we can only get one cupful. "Who is raising it?" was asked. Answer: "A leper."

It would be unfair to refer too particularly to the subject of immorality among the lepers at Molokai, but I shall mention here, that it is wrong from a scientific point of view to keep the illegitimate children there: 50 % of all the children born at Molokai are illegitimate, 45 were born in two years according to Mr. McVeigh. Some are kept there until they contract leprosy. Girls from the leper settlement are allowed to marry outsiders. Sometimes they are kept as "assistants."

The Sub-committee of Congress has reported: "It was made plain to your Committee that immorality in the unrestricted illegitimate association of the leper patients is permitted by those in charge of having control of the leper settlement. The

only attempt seemingly to abate or minimize this evil is by counseling and earnestly urging marriage on the part of lepers, even going so far in this direction as to aid in facilitating divorces where a leprous man or woman has a wife or husband outside of the settlement, so this husband or wife thus released from the marriage obligation might again be married to a leper and inmate of the leper settlement."

Here is a letter that was written by a resident catholic priest of Molokai :

Kalaupapa, Molokai,

March 25, 1902.

Mr. Judge Humphreys.

DEAR SIR.—Please be not offended that I, a perfect stranger, take leave to write privately to you for advice. The Molokai settlement, under the exclusive control of the Board of Health, needs an impartial investigation. Allow me to mention a few doings of the officials which seem to me to be incorrect.

1. The greatest stain of the settlement is the unlawful, but by the Board of Health tolerated, cohabitation as man and wife of single or married persons. Over 100 of such couples living in concubinage or adultery can be found in this "Iwilei."

The majority of the children born here are illegitimate. The supposed desire to prevent as much as possible the undesirable offspring of leprous parents should have been enough to induce the authorities to favor morality ; but then immorality makes the place attractive to the leper, and wallowing in the mire, his energy has gone and his possible outcry drowned. The Board of Health lets things go, and the lepers, whites and natives, with very few exceptions (outside of the two Homes), are quite pleased in this Augean Stable. Drunkenness receives the same favor.

2. The Board of Health being attacked about the prevalent immorality, claimed that the enforcement of law and the administration of justice belonged to other departments. It should be so, but it is not so. The acting Superintendent, the representative of the Board of Health, is at the same time the (—), by the sheriff appointed head of police in the settlement, hence Board of Health and police are united in the same person.

Now, how about the judiciary department? There is no judge here, he lives on the other side of this island, and is not allowed to come to the settlement without an invitation of the acting Superintendent. The last time the judge was here was in November or December, 1900.

The acting Superintendent breaks into houses without a warrant, as the chief of police, he arrests persons supposed of being offenders, confines them in prison, keeps them there for

months or as long as it pleases him. The lepers, as a rule, accept such treatment, and what else can they do?

When a leper thinks himself injured by the Representatives of the Board in matters belonging to that body, and when he complains to the Board, the matter in dispute is always referred back to the accused authorities, who become thus judges in their own cases.

The administration of justice requires the presence of legal advisers, etc., and the right to appeal without this important, but certainly embarrassing right, the appointment of a resident judge here in this narrow community under the thumb of the Board of Health, would be a very questionable gain, and should he be a member of this community, or a native, the lepers would go to court as often as possible for the fun.

Healthy persons (Kokuas) are allowed to stay with and care for their sick relatives, etc. These persons are forced to work for the Board of Health where and when the Board orders them to work, or must leave the settlement.

These few points are enough to give you an idea of the management of this Institution. Is it correct, and if not, how can it be remedied? The legislature has failed. Letters when accepted by newspapers attract only the attention of the authorities here, for revenge. The lepers are too indifferent, jealous, and greedy to act in harmony. You would do me a favor to give me an idea of what to do, but this matter is strictly private.

Yours very respectfully.

FATHER WENDELIN.

There was a Mormon clergyman in Molokai. Asked as to what this man was there for, Mr. Smith replied: "Among the Hawaiians there are a good many Mormons. He holds meetings at his church." Senator Burton asked Mr. Smith: "Does he teach polygamy?" Mr. Smith answered: "No; it is not allowed in this country." I beg to say that that is just what that Mormon is allowed in Molokai for—to preach polygamy and remove the natural prejudices against the lepers who have wives outside and who are induced to marry again at Molokai.

Judge Humphreys, in discussing the leper question, said: "This is going to be the policy of the United States—to establish a lazaretto for the lepers in the United States. As far as I have been able to sound public sentiment, the lepers of Hawaii would look upon the change from the control of the Territory of Hawaii to the National Government as a great boon.

"Senators, I doubt if there are twenty-five men in Honolulu to-day, to show how carelessly the leper settlement is run by the Board of Health, who can tell you the name of the physician

of these lepers. Within the last six weeks, a physician who drank, deserted his wife and children, was put in charge of the lepers, with no regard for public opinion and public sentiment. They sent him there, and within the last month discharged him. The newspapers did not say why. But I was informed they discharged him because he had improper relations with the female lepers in its criminal and revolting sense. This man was put in complete control of the lepers. It is a thing to chill one's blood in his bones."

Hon. Wm. O. Smith, ex-President of the Board of Health of Hawaii wrote me, from Washington, last March: "The community at the islands is very much opposed to the suggestion that Molokai be made the National Leper Asylum, and we were astonished to learn that the Senate Committee had recommended that it should be adopted. Since arriving here (Washington, D. C.), I am led to believe that the proposition meets with disfavor in every quarter."

The Hawaiian Board of Trade memorial says: "In Hawaii occidental and oriental civilizations meet in a contest paralleled in no other country on the globe.

"When the time comes that the oriental aliens, as a body, insists on a corresponding standing of living and family *status* to that of the white man, the danger of the overthrow of Caucasian civilization in the Orient will cease. To attempt to regulate by laws their difference is well nigh impossible. It is in the power of National Legislation to throw the government patronage in support of civilizations they embrace and expect to have preserved for them and their successors."

The only way, I think, to conquer the spread of leprosy in Hawaii is to change some Oriental practices into Occidental ones—for instance, instead of fish diet, give them meat and milk.

National and not local government of leprosy questions is absolutely imperative.

According to the provisions of the Platt-Wanger leper bill, now before Congress, a National leper home should be built in the center of Yellowstone Park, or in some other part of the interior away from the seacoast, for the lepers of our States. Molokai should be kept as a lazaretto for Hawaiian lepers, Cabras Island for Porto Ricans. There is already one provided

for the Filipinos on the island chosen for the purpose in the Philippines, and one in Guam. All these lazarettos should be under the jurisdiction of our National Government. Our Marine Hospital officers should be placed in full charge of them, and local Boards of Health should have nothing whatever to do with them, excepting to find and turn over to them the lepers. The Perkins-Wilcox leper bill, which, in its second section, provides for expatriation of the lepers of our States, by sending them to Molokai, should never become a law.

I beg leave strongly to recommend to our Secretary of the Interior that the care and maintenance of all these leper asylums be taken from the local governments and given to the U. S. Public Health and Marine Hospital Service, and for which Congress should be asked to make extra appropriations.

I have the honor, Mr. President, to be

Your most obedient servant,

ALBERT S. ASHMEAD, M.D.,

Late member of the Provisional Committee, Berlin Leper Conference.

[Subsequent enclosures:]

Department of the Interior.

Washington, Dec. 31, 1903.

Dr. Albert S. Ashmead, 333 W. 23d St., New York City.

Sir:—Your letters of December 6th and 21st have been received, in which you take exception to statements contained in the reports of Mr. J. D. McVeigh, Superintendent of the Leper Settlement at Molokai, and Dr. Charles B. Cooper, President of the Hawaiian Board of Health, transmitted to this Department by the Governor of Hawaii, and criticize the administration of said settlement, recommending that Supervision thereof be transferred to the United States Public Health and Marine Hospital Service; and I beg to inform you that said letters have been forwarded to the Governor of Hawaii for consideration, note and return.

Very respectfully,

THOS. RYAN,

Acting Secretary.

A BILL for the better control of the lepers and leprosy questions of the Territories of the Philippines, Guam, Hawaii, and Porto Rico.

BE IT ENACTED by the Senate and the House of Representatives of the United States of America in Congress assembled:

SECTION I. That the control, management and government of the lepers and leper settlements and all scientific and other questions pertaining to them of the Philippines, Guam, Hawaii and Porto Rico are hereby taken from the local health authorities and given to the Public Health and Marine Hospital Ser-

vice, whose medical officers shall at once assume full charge of them.

SECTION II. That special appropriations for this purpose shall be made by the Secretary of the Treasury in conformity with the suggestions and detailed estimates of the Supervising Surgeon-General of the Public Health and Marine Hospital Service

SECTION III. Nothing in this act shall be construed to mean that the leper asylums at either of these places shall be made a national leper asylum for lepers from the United States proper. Lepers in the States of the United States must not be transported to Molokai, the Philippines, Guam or Porto Rico.

[THE END]

REPORT OF A CASE OF HYDROPHOBIA WITH AUTOPSY.*

BY G. MORTON ILLMAN, M.D., PHILADELPHIA.

I think it prudent to report this case for discussion because of the fact that proper precaution, protecting human life from one of the most distressingly fatal infections known to mankind, is overlooked, especially in the large communities in America. In some instances the very existence of the condition is questioned by a few members of the medical profession and by the laity.

The patient was a well-developed male, aged 37 years, and an electrician by occupation.

Family History: His family history was negative with the exception of the fact that his mother died of phthisis.

Previous Medical History: Investigations as to the previous medical history showed that the patient had been a comparatively healthy man with the exception of a slight persistent cough, with which he had suffered some years ago, but had ceased after the patient discontinued the excessive use of tobacco.

Two years ago the patient met with a severe accident necessitating the partial amputation of three fingers of the right hand. This accident was followed during the present year by a severe burn of the right arm and forearm. The patient was just recovering from the latter condition when, upon attempting to

* Read before the Philadelphia County Medical Society, Dec. 9, 1903.

caress a strange dog, he was bitten in the palm of the left hand, in the web between the first two fingers.

The wound was thus inflicted August 23, 1903. It bled freely at the time and was cauterised one hour later with a solution of silver nitrate (of questionable strength) followed by pure carbolic acid, and an antiseptic dressing applied. The wound healed kindly without any decided complications.

Premonitory Stage: In the evening of October 1, 1903, just 39 days after its infliction, the patient's attention was attracted to his left hand by a tingling sensation in the tips of the fingers and cicatrix. His wife states that during the following two days he appeared to be greatly depressed, restless at night, had little or no appetite, and complained of a constantly increasing aching sensation in the left hand and arm.

Spasmodic Stage. Upon arising from bed in the morning of October 4, the patient complained most decidedly of the left hand, arm and shoulder, and of a pronounced feeling of debility. He went to breakfast, however, as usual, and while at the table asked for a glass of water, and upon attempting to swallow the liquid it was suddenly and involuntarily expelled from his mouth. He then went up-stairs without assistance and lay upon a couch, complaining at the time of feeling extremely weak.

At 10 o'clock A.M. I was asked to attend the case and found the patient decidedly restless, and complaining, in addition to the aching arm and shoulder, of being very chilly. The skin was moist, the muscles relaxed, reflexes normal, and face flushed. Pressure along the nerve trunks and muscles of the left arm and shoulder was slightly painful, but did not seem to be productive of any local or general spasm. Attempts at prolonged conversation, however, seemed to cause, from time to time, a sudden involuntary laryngeal spasm, after which the patient would be unable to immediately resume talking because of a marked dyspnea thus produced. The temperature at this time was 101° F.; the pulse 102; and the respiration, when regular, was 24.

Upon receiving the history of the patient's inability to swallow water while at breakfast, I decided to prescribe an antirheumatic in powder form, to be taken with water during my absence, in order to avoid arousing the patient's suspicions regarding my belief in his ability to swallow liquids as usual.

At 3 o'clock in the afternoon I was informed that after a great effort he had swallowed one powder, but that a repetition had been absolutely impossible, and furthermore, that he had refused all liquids and solids at lunch time.

There was now a pain on the left side of the neck which seemed to be most marked along the posterior borders of the trapezius and sternomastoid muscles, radiating towards the occipital portion of the skull.

The patient complained of an almost constant smothering sensation in the larynx, and the slightest efforts to talk would now very readily provoke a laryngeal contraction, during which time the patient continually held his hand to his throat in an effort to relieve his dyspnea, and was extremely restless. The temperature continued to be 101° F., the pulse was 98, and respiration 26.

Feeling that future treatment of the patient depended upon an absolute surety as to the diagnosis, I asked Dr. Samuel Wolfe to see the case, and after a very careful examination of the patient and consideration of the definite history Dr. Wolfe came to the conclusion that the case was almost certainly one of true hydrophobia. The actual state of affairs was at once explained to the family, and thus all obstacles to future treatment eliminated.

At 6 o'clock the same evening (10 hours after the first appearance of active symptoms) it became necessary to resort to hypnotics to control the spasms, which were now becoming very much longer in duration and decided in severity. An eighth of a grain (gr. $\frac{1}{8}$) of morphine and one one-hundred-and-fiftieth grain (gr. $\frac{1}{150}$) of atropine were accordingly given hypodermically with a very beneficial result, enabling the patient to obtain a much needed rest of 4 or 5 hours' duration.

It became necessary to repeat this injection 6 hours later, at which time there was a noticeable hyperesthesia of the left side, especially marked at the time of puncture with the hypodermic needle.

The patient's general appearance was now that of the decidedly sick man; and one whose suffering was of anything but an hysterical nature, his manifest desire to assist with his treatment, and avoid worrying his family being most pronounced.

The second administration of morphine and atropine had only been beneficial so far as the respiration was concerned, the injection being repeated at 5:30 A.M. ($5\frac{1}{2}$ hours after the second administration) with better results, especially upon the severity of the laryngeal spasms; but with no decided effect upon the severity of recurrence.

All attempts to have the patient take food of any variety by the mouth failed, and nutrient enemata (of beef) were resorted to and retained, being given always after a hypodermic injection of the narcotic.

In the afternoon of the second day of the spasmodic stage, Drs. M. P. Ravenel and D. J. McCarthy were called in consultation and made a careful examination of the patient, especially as regarded the nervous symptoms, and stated that in their opinion the case was undoubtedly one of hydrophobia.

There seemed to be a slight tendency to increased salivation during the past six hours, and now, regardless of the atropine that had been given, there was a moderately abnormal flow of saliva, probably caused, to a certain extent, by the almost continual working of the patient's jaws and tongue.

With the approach of evening the general condition became gradually worse, and at 8:30 P.M. a series of spasms developed, extending over a period of thirty minutes.

During this series of paroxysms there was increased salivation, intense dyspnea, rolling of the eyes, continual change of position, marked eructations of gas, and the passage at this time of about 6 ounces of urine, making 10 ounces passed within five hours. Delirious symptoms now became noticeable, but occurred only at intervals of two to three hours, and were of very short duration.

During the course of the next ten hours but two administrations of morphine were necessary, the patient resting fairly quietly until Tuesday morning (October 6, the third day of the spasmodic stage), at which time control of the patient became a difficult matter. The excitement became maniacal, and it was feared the patient would do himself personal injury, although, his entire appearance was at times one of terrible fear, and he would hold his throat with both hands in a frantic effort to relieve his dyspnea. Attempted inhalations of chloroform at this and other times gave no relief, and only seemed to increase the suffering by its presence.

After some effort one one-hundredth of a grain (gr. $\frac{1}{100}$) of hyoscine hydrobromate was given hypodermically with a very gratifying effect. This dose of hyoscine was repeated three hours later, and was the last administration of a hypnotic of any kind that was necessary during the remaining course of the disease. The temperature was now 101.6° F., the pulse 124, and the respiration 44.

Paralytic Stage.—A few hours later, a gentleman who saw the case pronounced it to be one of hysteria of a remarkable type, and was so positive as to his diagnosis that it was decided to put the patient upon hysterical treatment. Accordingly all medicinal administrations, rectal feedings, etc., were discontinued, and no one except the nurse or a substitute allowed in or near the room. Twenty minims of sterile water were given hypodermically every two or three hours, and the nurse informs me that there was absolutely no effect as to the frequency of the spasms, but there seemed to be a steady decrease in the severity, regardless of the time at which the injections of water were given. In other words, it was very apparent that, regardless of treatment, the patient was slowly passing into the paralytic stage of hydrophobia.

The patient now began to perspire profusely, and vomited for the first time about 4 ounces of yellowish, frothy mucus. The profuse sweating continued, and a few hours later both pulse and respiration began to fail rapidly. It became very evident that a return to medicinal treatment was necessary, and one-fiftieth of a grain (gr. $\frac{1}{50}$) of digitalin, and one one-hundred-and-fiftieth of a grain (gr. $\frac{1}{150}$) of atropine were given hypodermically with much benefit.

The periods of delirium were now of frequent occurrence and of long duration. When rational the patient declared that the choking sensation had entirely gone from his throat, and that he was now smothering from an oppression over the epigastrium, and during a spasmodic attack would put both hands to this region instead of to the larynx as formerly. It was, therefore, decided to endeavor once again to administer a liquid by way of the mouth. Two ounces of milk containing a fluid dram of whiskey were brought to the patient, and with a little assistance and encouragement the entire contents of the glass were swallowed without any great effort. On finding himself

able to swallow liquids again the patient asked for a cup of coffee, of which he drank a few drams. About thirty minutes later both coffee and milk were vomited, and all efforts to repeat the same were forcibly resisted.

In spite of stimulants the pulse and respiration failed steadily, and the patient became permanently unconscious, at which time 20 minims of ether were given hypodermically, and resulted in a sudden general clonic muscular spasm.

External heat had been constantly applied to the trunk and extremities, and digitalis or atropine given, either together or separately as occasion demanded, until the patient's death of respiratory failure at 7 A.M., October 7, three days (71 hours) after the onset of active symptoms, and nearly six days after the onset of prodromal symptoms.

The hyperesthesia was a prominent symptom throughout the course of the disease, and became gradually more pronounced until finally, both before and after unconsciousness, warm applications could only be placed to the extremities very gradually and retained in position with difficulty. Hyperesthesia, as a rule, was most marked in the left side. Very slight stimulations, such as the sudden entrance of light to the room, the running of water and the ringing of the door bell, were many times provocative of a spasm. The reflexes were increased and the plantar reaction always downward. The pupils became dilated and non-reactive about eight hours before death.

Delirium began to manifest itself about thirty-six hours after the onset of active symptoms, became more prominent during the administration of hyoscine, but was still present during the period of nine hours when the patient was receiving no medicinal treatment, and continued to the period of unconsciousness.

During the entire course of his illness there was never made in the presence of the patient any mention of or reference to dogs or hydrophobia, and he was made to believe, so far as possible, that he was suffering from rheumatism of the throat muscles.

At no time during his illness did the patient simulate in any manner the actions of a dog or other lower animal, although he frequently referred to the dogbite as being the cause of his present condition.

The temperature showed a gradual rise until the second day

of the spasmodic stage, when it reached 102° F., after which it ranged between 101.8° and 100°.

The inspiration when at all regular, varied from 28 to 40, and simulated at times a Cheyne-Stokes respiration, especially after a series of laryngeal spasms. After unconsciousness, ether dropped on the larynx and upper portion of the chest brought about a prompt respiratory reaction.

I had an opportunity to make but one examination of the urine, the specimen being collected during the second twenty-four hours, after the onset of active symptoms. It was high-colored, decidedly acid, and showed a specific gravity of 1040; there was no albumin nor sugar present. No microscopical examination was made.

PROPHYLAXIS: All linens, towels, etc., used around the patient, especially those contaminated with saliva or vomit, were at once thrown into scalding water and later boiled. After death, all needles, thermometers, spoons, etc., were either destroyed or sterilized, and the floors, bedding, and furniture thoroughly wiped off with a strong solution of carbolic acid.

AUTOPSY: The autopsy was made ten hours after death by Drs. McCarthy and Ravenel, with the following results:

The *lividity* of the dorsal surface of the body was very marked, and *rigor mortis* of the upper and lower extremities very well developed.

The *skull* was thin. The *brain* and *membranes* were normal, both over the convexity and the base.

The *spinal cord* and its *membranes* were of normal appearance, as were the *pancreas*, *adrenal glands*, and *spleen*.

The *lungs* showed some adhesions in the right pleural sac, a rather marked emphysema along the anterior border of the right lung and an area of healed phthisis at the right apex.

The *liver* showed a slight passive congestion, otherwise normal.

The *heart* was normal with the exception of a patch of old pericarditis on the anterior surface.

The *kidneys* appeared to be normal. The inner surface of the *larynx* was covered with a dirty mucus and there was considerable frothy mucus in the *trachea*.

MICROSCOPICAL EXAMINATION: The microscopical examination of the central nervous system shows typical tubercles

of Babes in the *medulla*. The round-cell infiltration around the bloodvessels was very distinct.

Sections of the *cerebral cortex* and *base of the brain* show no evidence of inflammatory change.

Sections of the *Gasserian ganglion* and also of the *intervertebral ganglia* show a round-cell infiltration in the stroma, a diffuse chromatolysis of the ganglion cells, and a vacuolation of some of these cells, with a proliferation of the capsular cells, in most areas of only moderate degree, but in some areas filling up the entire capsule.

The *peripheral nerves* and the *anterior* and *posterior roots* show no change after careful investigation.

Microscopical study of the viscera gave perfectly normal appearances in all the *viscera* with exception of the *kidney*. These sections show some congestive swelling of the glomeruli and a cloudy swelling going on to marked degeneration of the cells of the tubules.

In other words, pathological lesions typical of hydrophobia were found in a case associated with parenchymatous nephritis. Neither the pericellular or perinuclear round-cell accumulation of the central nervous system nor the lesions of the intervertebral ganglia are seen in cases of nephritis.

INOCULATIONS: Three rabbits were subsequently inoculated from the medulla of the patient, with the result that all three rabbits died after a period of seventeen to nineteen days, presenting typical symptoms of rabies, and subsequent sections made from the nervous systems of these rabbits showed pathological changes typical of rabies and corresponding to those found in the nervous system of the patient.

THE DOG: The dog was of the small terrier type, showed no sign of rabies, and is said to have been playing with some children only a short time before biting the patient. The killing and cremation of the dog prevented a subsequent autopsy.

I close this report with the earnest plea that an effort will be made to have constituted or enforced the proper laws, compelling the muzzling and quarantining of dogs at all seasons of the year, that society may thus be protected from the fatal condition, and that if possible, it be thus completely eliminated, as is the case in many foreign countries, notably Australia.

CAECAL OR BLIND ENDING URETER.

BY BYRON ROBINSON, CHICAGO.

The case I here present of caecal or blind ending ureter with illustrations arose from a man. The enormously dilated distal ureter pelvis and calyces is well shown in the illustration

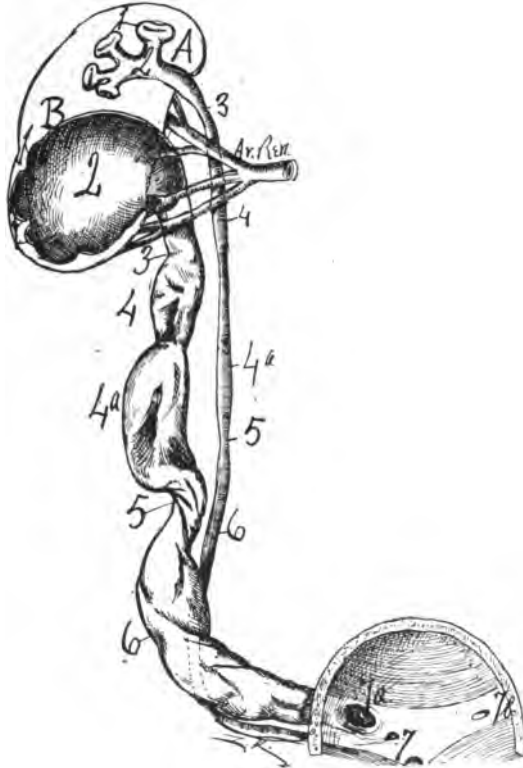


Fig. 1-

(Fig. 1.). The right kidney presents a distinctly separate and duplicated calyces, pelvis and ureter proper. The distal ureter is the one dilated, hydroureter. Evidence of long continued distention and consequent dilatation is evident from the fact that the pelvis and calyces and ureter proper, practically form a single continuous channel, cyst. I have demonstrated in a number of cases that dilatation of the ureter occurs almost entirely in normal points of ureteral dilatation, not at the ureteral isthmuses. For example, the proximal ends of the calyces, at

the fornices of the calyces, will present large dilatations whereas the neck of the calyces will present scarcely any dilatation. In short, in ureteral dilatation the ureteral dilatations (reservoir) are the localities which enlarge, and not the ureteral isthmuses or constrictions. This makes ureters dilated appear as if they really had strictures. The accompanying complete right unilateral duplicate ureter presents the usual ureteral dilatations and constrictions. The abnormally dilated ureter still retains evidence of original ureteral dilatation and constriction. Ureteral valves and spirality are also evident as well as flexuositities and sinuosities. The proximal ureter possesses the normal, usual dilatations (1, 2, 4, 4a, 6,) and constrictions (3, 5, 7,) Fig. 1. The proximal ureter passes dorsal to the distal ureter, crossing at the pelvic ureteral dilatation. The bloodvessels are carefully drawn in fig. 1 according to the specimen which shows a single normal trunk of the arteria renal as but abnormal branching of some i.e., its original distribution is for a duplicate pelvis. The distal end of the blind dilated hydro-ureter, a constriction similar to a pucker string on a tobacco sac. The vesical orifice of the distal ureter (7a) opens lateral-wards and proximal-ward to that of the proximal ureter, (7).

This anomaly among ureters would present important and practical matters, both as regards ureteral catheterization and surgical intervention. At present, in ureteral surgery, unilateral duplicate distal ureteral orifices are of practical importance, and besides they are not such a *rara avis* because I have seen some 13 during the past two years. However, here I wish to present unilateral duplicate distal ureteral orifices with a caecal or blind ending of one ureter. The following cases are selected to illustrate the subject. The following cases of caecal or blind ending ureter selected from literature, present ample points of interest in the rising field of ureteral surgery.

1. Lechler, 1835, reported a fatal case in a child, where the autopsy demonstrated that the distended blind end of the ureter projected into the vesica urinaria appearing as if there were two bladders. The death was due to gangrene of the distended blind end of the ureter lying within the bladder.

2. In 1856, Lilienfeld, in a Marburg dissertation, reported a case of blind ending ureter in a 65 year old man dying of

typhoid fever. The autopsy presented a complete duplicate ureter on the right side. The proximal ureter crossed the distal one, and made its exit in the bladder to the median side of the distal one. From the blind end arose ureteral dilatation, atrophy of the concerned renal segment and a projection of the blind ureteral end into the bladder lumen adjacent to the caput gallinaginis. No urinary difficulty arose. Doubtless cessation of renal function occurred in *intra-uterin.* or early extra-uterin life from urine pressure in the ureter.

3. Von Heller in 1869, reported the case of a man 79 years old dying of pneumonia. The abdomen was enormously distended. The autopsy demonstrated complete duplicate ureters on the right and partially complete on the left i.e., the two left ureters converged one inch proximal to the bladder. The abdomen was almost entirely filled by a dilated right proximal ureteral cyst—hydro-ureter which possessed numerous sinuosities, flexions, and ended blindly in the middle line of the trigone immediately proximal to the orificium urethrae internum. The distal ureter was also a hydro-ureter, apparently ending in the bladder proximal, and external to the blind ending of the proximal ureter. The partially duplicated ureter on the left was negative.

4. Von Osterloh, 1862, reported a new born female with complex duplicate left ureter. The proximal ureter ended blind in the dorsal wall of the bladder in a dilated blind sac. The distal ureter ended normally. It is also reported that the right ureter was dilated where the distal end of the ureter ends blind in the bladder wall, it may become distended and project or invaginate the bladder wall producing the impression of two bladders lying within each other.

5. Karl Weigert in 1877, reported a complete right duplicate ureter. The proximal ureter ended blindly immediately dorsal to the *veru montanum* in the prostate. The hydro-ureter was as large as an intestine. The proximal ureter crossed dorsal to the distal ureter, and the orifice of the proximal ureter opened distal and median to that of the distal ureter. The subject was a tubercular man, otherwise not remarkable. Weigert also reported a duplicate left ureter without a blind ending.

6. Bostroem reported in 1884 a typical case of a 23 weeks old female infant, in which the autopsy demonstrated complete

bilateral ureteral duplicity, embryonal closure of one ureter with dilatation and invagination or projection of its blind end in the bladder. The urethral exit was dislocated by the pressure of the invaginated blind ureteral end. Extensive bilateral hydro-ureter existed with vesical dilatation and parietal hypertrophy. This child presented strongly distended abdomen immediately after birth. She would make no urine, for a day at a time, then suddenly urinate large quantities. The ureter, the thickness of the thumb, presented elongation, dilatations, sinuosities and flexions. The most logical explanation of the hydro-ureter in this case is: the obstruction is caused by the projection or invagination of the blind ending ureter inducing flexions or angulations, compromising of the ureters, urethra and their exits. The ureter may end in the bladder wall as a blind pouch with no dilation. In such cases the corresponding kidney (single or duplicate) is either atrophic or absent.

7. Dr. E. G. Orthman reported a 28 year old woman from whom during an operation a large cystic tumor was dissected and the proximal end of its pedicle (the ureter) was ligated. The conclusion was the dilated, blind, end of the ureter. The patient recovered.

8. F. Tangl reports a 65 year old woman with a duplicate right ureter which united towards its distal extremity and ended blindly in the ventral vaginal wall. It was mistaken for Gaertner's duct. Left kidney was atrophic. Interstitial nephritis existed in the right kidney. She had a bilocular uterus with one cervix.

9. Kolisko reported a case with complete duplicate right ureter in which the orifice of the proximal ureter opened into the bladder distal to that of the ureteral orifice as a sac-like dilatation which extended distalward into the urethral lumen. The proximal renal segment supplying the proximal ureter was atrophic. The proximal ureter crossed the distal one ending distal to it.

10. Ludwig Geerdts in 1887 reports the case of a female infant 3 weeks old, having complete unilateral ureteral duplicity with blind ending of the proximal ureter. On the morning of the 8th day after birth a swelling appeared in the vagina. The child was a premature birth, had diarrhea tenesmus, much pain and distended abdomen. A peritonotomy was performed, but

the child died from peritonitis. The autopsy demonstrated complete left ureteral duplicity with hydro-ureter and pyo-ureter in the proximal one. Invagination or projection of the abnormal ending of the proximal ureter in the vesica urinaria and urethra. The ureter was the dimension of the little finger with irregular dilatations the size of goose eggs, and presented pyo-ureter as well as hydro-ureter. The ureter was elongated, increased in diameter with numerous torsions, flexions and sinuosities. It appears the blind end of the proximal ureter was located $\frac{1}{4}$ inch distally and medially to the normally localized ureteral orifice of the left distal ureter. The proximal ureter crossed dorsal to the distal ureter. The blind end of the proximal ureter projecting in the bladder can be sounded in the bladder.

CONCLUSIONS FROM CAECAL OR BLIND ENDING URETER.

1. Blind ending ureters produce hydro-ureters from angulation of its extremity.
2. The hydro-ureter may remain an indefinite time or produce atrophy of the corresponding renal segment.
3. Blind ending dilated ureters tend to invaginate or project in the lumen of the bladder.
4. The projected or invaginated blind end of the hydro-ureter lying within the bladder lumen compromises canalisation, the flow of urine by pressure flexion or angulation of the intramural ureters or urethra.
5. This rule, so far as I am aware, first announced by Weigert obtains in all our cases, that the distal orifice of the proximal ureter its exit in the bladder medianward and chiefly distal to the orifice of the distal ureter. Also the complete duplicate ureters cross each other.
6. The blind end of the hydro-ureter may be sounded from the bladder, hence the ureteral dilatation is chiefly due to valvular or angular obstruction.
7. The fact the blind ending dilated hydro-ureters occur at all ages indicates that they alternately close and open for long periods of time.
8. The blind ending ureter is of practical importance both as to ureteral catheterization and also in operative intervention.
9. In operative intervention I would suggest the ligation of the dilated ureter adjacent to the ureteral pelvis producing

renal atrophy. It is impractical, owing to the renal blood supply, to attempt to extirpate the renal area supplying the blind dilated ureter. The blind end of the ureter projecting into the bladder might be incised, but that would produce an atrium for ureteral infection.

10. No doubt that the obstruction in the blind ending hydro-ureter, since it can generally be sounded from the bladder, is due to the formation of valves between the distal ureter and bladder wall—similar to the vesico-ureteral valve.

Fig. 1. Represents a complete duplicate ureter. The proximal ureter (A) presents small calyces (1) and pelvis (2). The proximal isthmus (3) is marked. There are 2 moderately developed lumbar spindles (4, 4a); a distinct middle isthmus (5); slightly marked pelvic spindle (6); it crosses dorsal to the distal ureter (dotted line), and the vesical orifice has its exit distalward and medianward to that of the proximal one.

The distal ureter (B) dilated, hydro-ureter, caecal or blind presents calyces (1), pelvis (2), and ureter proper dilated into one continuous channel. Proximal ureteral isthmus (3), two lumbar spindles (4, 4a), 5 middle isthmus (5). Pelvic dilatation (6) and (7a) vesical orifice located proximal and lateral to that of the proximal ureter. Abnormal valves are evident. Sketched from a specimen in the Rush Medical Museum by the courtesy of Prof. LaCount.

THE MANAGEMENT OF FEVER IN GENERAL.*

BY AGUSTUS A. ESHNER, M.D., PHILADELPHIA, PA.

In the present state of knowledge fever must be looked upon as a symptom-complex resulting from some derangement of the bodily chemistry, from some disturbance in metabolic equilibrium, which may be brought about in a variety of ways. The causative factors may be generated within the body, or they may be introduced from without, in either event operating through the agency of the nervous system. Thus, fever may result from the retention within the body of the excrementitious products of retrogressive metamorphosis, as in cases of uremia ;

* Read before the Philadelphia County Medical Society, June 10, 1903.

in consequences of profound changes in the blood, as in cases of anemia: from exposure to intense heat, as in cases of insolation; and it occurs readily in children—in whom the nervous system is notoriously unstable—on slight provocation, such as gastro-intestinal derangement and even emotional influences. Most commonly, however, fever is due to changes secondary to infective processes—in other words, to the toxic effects of the products of bacterial and cellular activity.

Of the ultimate mechanism of the febrile process nothing definite is known. It is a well-recognized biologic fact that plants and animals are provided with means for adapting themselves to variations in the surrounding temperature, so that they produce or conserve a greater amount of heat when exposed to low and a lesser amount when exposed to high temperatures. Loss of heat in man is counteracted by contraction and favored by dilation of the peripheral bloodvessels. It is reasonably certain that this regulatory power is lodged in the central nervous system, and it is believed that it is under the control of a hypothetical thermotaxic mechanism, which maintains the relations between heat-production and heat-dissipation under varying conditions.

The most distinctive and the most constant feature of the febrile process is elevation of temperature. Although it is customary to attempt a differentiation between fever and pyrexia it is a question whether such a distinction can be successfully made. It is true that occasionally certain conditions ordinarily febrile, such as typhoid fever, typhus fever, septicemia, scarlet fever, are unattended with pyrexia, but under such circumstances it may be that the pyrogenic toxic substances usually produced are not generated or are not absorbed or that their effects are neutralized by antipyrexial substances generated within the body. Nevertheless it is doubtful whether we can recognize a febrile process in the absence of elevation of temperature, or if pyrexia occurs in the absence of fever. Those who endeavour to maintain a distinction between fever and pyrexia take the ground that mere elevation of temperature of nonfebrile origin is due to either increased heat-production or diminished heat-dissipation, or to both, while the elevation of temperature attending the true febrile process is due to an elevation of the heat-regulating

mechanism to a higher level without alteration in the relation between heat-production and heat-dissipation. It has been thought that elevation of temperature in the presence of infectious diseases is a conservative process, perhaps having antibacterial or antitoxic value, but as to the accuracy of such a view the evidence is not conclusive. Other symptoms of the febrile process, such as accelerated action of the heart, increased frequency of respiratory movement, circulatory changes, alterations in secretion, assimilation and metabolism, and in function generally may be due to the same factors as the underlying morbid state or to the pyrexia, or to a combination of the two. The problems therefore, that confront the clinician in the management of a patient exhibiting fever comprise the removal of the causative and underlying factors in so far as this is possible, and the restoration of the metabolic equilibrium, whose derangement is manifested in the various disorders of function. Often little or nothing can be done to fulfill the first indication, as the underlying morbid process is a specific and self-limited one insusceptible of abortion or abridgement, but unless there be some contraindication, some form of elimination or evacuation or attenuation may with advantage be instituted, such as emesis, catharsis, diaphoresis, diuresis, enteroclysis, hypodermoclysis, intravenous transfusion. Through emesis irritants will be removed from the stomach, and infection by way of this organ averted or absorption of poisonous substances from its cavity prevented.

The Lymphatic System and the Tonsils.—Henry L. Swain believes that the practical deduction from his study of this subject is not to give free rein to indiscriminate attempts at removal of tonsils first, second, or third, nor is it to let them alone. The practical point is in operating, to be thorough, and that to remember when it is done, we have some tonsillar tissue left. Immunity is not conferred by operation, only less liability to infection and disease. There is a broad field for progressive work along the lines of strengthening the bulwarks which nature has erected.—*Medical Record*.

SOCIETY PROCEEDINGS.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Stated Meeting, held January 4, 1904.

The Vice-President, Dr. D. S. Dougherty, in the Chair.

PRIMARY ENDOTHELIOMA OF THE LUNG AND PLEURA.

Dr. Maurice Packard presented this patient, of whom he gave the following history: Male, aged 24 years, cigarmaker by trade. Father died of endocarditis, sister of apoplexy, brother of diabetes. No history of tuberculosis in the family. The patient gave no history of syphilis or of alcoholism, and claims he was never ill until present time. About five years ago he began to cough, with very little expectoration, but otherwise was perfectly healthy until fifteen months ago, when the cough became more distressing and was accompanied by profuse expectoration. He became very short of breath, especially on exertion, and suffered from pains localised anteriorly on the right side. These pains were increased on deep inspiration. There were no night sweats, nor at that time any hemoptysis nor loss of weight. Although the examination of the sputum was negative, he was sent South with a diagnosis of tuberculosis. As there appeared to be no improvement, he remained but a short time. The symptoms continued about the same, but he noticed that the veins of his chest and abdomen were growing larger, and that when he coughed he brought up considerable blood, sometimes as much as a cupful. His sputum examination was still negative.

Dr. Packard saw him for the first time about two months ago, and his examination developed the following: The man was fairly well nourished, but had peculiar varicosities on the chest and abdomen. His right lung did not expand as well as the left, and there seemed to be a change in the dimension of the thoracic arch. Pectoral fremitus was diminished on the right side, from the second to the fifth intercostal space, and from the sternum to the axillary line. Over this area the percussion note was flat, but over the other portions of the same lung and over the left lung it was almost normal. Vocal fremitus was diminished, and distant bronchial, almost tubular breathing could be heard over this affected region. Over the

other portions of this lung the sounds were normal. The heart, spleen, liver, and abdominal organs were normal. Sputum examination and thoracentesis were negative; the urine normal. One month ago signs similar to the above were found posteriorly in the lower lobe of the right lung.

ERYTHROMELALGIA.

Dr. J. C. Lynch presented this case of Weir Mitchell's disease or erythromelalgia, occurring in a man 51 years of age, who was also the victim of tabes. The patient was single, and an officer in the Navy. He had had the ordinary diseases of childhood. During adolescence he had pneumonia twice and typhoid fever. While on a cruise to the Far East he had Chinese malaria (?) (From his description one would be warranted in presuming that it was lues). Since he was twenty years old and up to the present time he had been free from sickness, except for three attacks of tripper. After the Spanish-American war he noticed that he had difficulty in holding his water (hurried sphincteric action), which was shortly followed by difficulty in walking (ataxic gait) accompanied by sharp-shooting, stabbing pains in the feet and legs (lightening pains). On consulting the ship's surgeon about his difficulty in walking, he was told he was suffering from beginning gangrene of the left foot. He was put to bed and his condition improved. Six months later the other foot became involved. The first two toes were then amputated. After recovery from this operation he retired from the service.

ACUTE THYROIDISM FOLLOWING CURETTAGE.

This case was reported by Dr. Brooks H. Wells. He said that since the time when the Roman matron measured with silken ribbon the throat of the bride before and the day after marriage, to determine by its rounded increase that she had been a pure virgin, the sympathetic relation of the thyroid gland to the pelvic organs has been vaguely known; but hardly more than a decade has passed since we began to appreciate the various facts that will in time lead to an accurate knowledge of the functions and physiology of this and the other ductless glands.

Under certain conditions there occurs in those individuals who have been the subjects of a thyroid tachycardia, a virulent acute toxemia characterised by a well marked group of

symptoms. This toxemia may follow operations upon the thyroid itself, operations upon the pelvic organs, or more rarely, operations upon the breast and other parts of the body, or any marked nervous strain.

The exact mechanism by which the function of the gland is disturbed or excited is not definitely known. The disturbances after operations on the thyroid itself have been attributed to an outpouring of toxic material into the blood, either as the result of the manipulation to which the gland is subjected or from a leakage and absorption from its cut surfaces. These causative factors can be ruled out when the thyroidism follows operations on other parts of the body. In cases similar to the one recorded below it seems certain that the condition is the result of a reflex disturbance of the central nervous centres and the sympathetic centres that control the activity of the thyroid glands, or as has recently been suggested, of the parathyroids.

The condition is often rapidly fatal, death occurring within the first three or four days from cardiac exhaustion. When recovery ensues, the symptoms rapidly or gradually disappear until the individual reaches the status present before the attack.

The following case of acute thyroid poisoning following curettage seemed to possess features of interest which made it worthy of record.

Mrs. X., aged 53 years, had passed the menopause at the usual time, but during the last six months had had repeated small bleeding from the uterus, which was not enlarged, and was freely moveable. She was nervous, thin, and poorly nourished. For many years she had had a slight enlargement of the right lobe of the thyroid, an excitable rapid pulse and and slight tremor, but no protrusion of the eyeballs. Auscultation of the chest revealed a few bronchial râles. No other pathological condition was discovered. To exclude the possibility of beginning cancer of the fundus uteri as a cause for the post-climacteric bleeding, a curettage of the uterus was performed under strict asepsis on November 5th, at 10 A.M. The scrapings from the endometrium were examined by Dr. Jeffries, Pathologist at the Polyclinic, who reported that they showed only a moderate grade of endometritis. There was no further symptom, local or general, that could be referred directly to the curettage.

The anesthetic was given by Dr. Bennett and was gas followed by ether. After a few breaths of ether her heart became so rapid that Dr. Bennett considered it wise to change to chloroform, under which the heart beats became slower. From the beginning of the anesthesia to the return to consciousness a little less than half an hour elapsed.

Six hours later the patient was flushed, tremulous, nervous, voluble, but not worried, and with mind clear. Her pulse had risen to 130 and became more rapid on any little excitement. Temperature 100.5 degrees, F. Twenty-four hours after the operation the flush, tremor, nervousness, and volubility were increased; the pulse had risen to 178 and at times was uncountable: her temperature was 99.5 degrees F., there was profuse sweating, a watery diarrhea, marked irritability of the bladder with polyuria, many soft râles all over the chest, and vomiting. The thyroid was perceptibly enlarged, especially on the right side, and presented a quite apparent thrill. There was marked throbbing of the heart and large arteries. Examination of the urine showed a sour odor, reaction neutral, sp.gr. 1012, no albumin, no casts, innumerable colon bacilli, and a few pus cells. These symptoms of an extreme toxemia continued to the end of the first week, then her temperature reached 101.7 degrees F., and the auscultatory symptoms of bronchitis became more marked, though there was little cough and little expectoration. Blood examination at this time showed no leucocytosis and no typhoid reaction.

From the fifteenth to the twenty-fourth day the patient's condition was such that death was expected to occur at any time. The toxic symptoms continued, the tongue became dry and brown, there was extreme weakness and the usual relation between temperature and pulse was reversed so that the most rapid and weak heart action was when the temperature was lowest. The diarrhoea ceased to be troublesome on the twenty-first day, and on the twenty-fourth the patient was able to take small amounts of solid food by mouth. From this time on improvement was steady, but slow, until she reached a condition approximating that before the operation.

Treatment.—At the beginning it was thought that some of the symptoms might be dependent upon an intestinal toxemia, and the patient was given calomel followed by a saline, and

repeated high colonic flushings. The bladder for several days was washed out with a boric acid solution at eight-hour intervals, the washing being followed by the injection and retention of two ounces of a 10 per cent argyrol solution. The diarrhea was finally controlled by tannigen by mouth, ten grains every three to six hours as needed, and starch and deodorized tincture of opium, ten minims, by rectum, every six to eight hours. The insomnia was relieved by the opium and by trional at night, in doses of from twenty grains at first to five at a later period. As it became impossible to make the patient retain food given by mouth, rectal alimentation was employed more or less from the eleventh to the twenty-second day. Solid food in small amounts was given on the twenty-fourth day. The heart action and general condition were not benefitted by any drug; colonic flushing, strychnin, digitalis, belladonna, suprarenalin, alcohol, all seemed to do more harm than good.

Dr. Robert C. Myles opened the discussion of this case. He said that one of the peculiar characteristics of exophthalmic goitre is the diminished electrical resistance. If some one would experiment with these cases in order to find out, if possible, what alkaloid is discharged into the system, and its exact relation to the thyroid, the speaker thought, these cases could be treated more successfully.

LEPROSY,

Dr. F. Dillingham presented a patient, male, aged 58 years, who was born in America, and has lived here, with the exception of one year spent in Mexico, during his entire lifetime. Eight or nine years ago a corn appeared on his right foot. It began to burn, and in a short time a perforated ulcer developed. He had the joint excised, and two years afterwards the second joint was also treated in this manner. Two years later a second ulcer appeared on the other side of the same toe. There are now two perforating ulcers present. This was about all the history the patient could give.

The speaker said that the diagnosis can easily be made from the typical picture presented and by exclusion of any other condition because of the lack of essential conditions. The brownish patches here and there, and the peculiar brownish color and scaling appearance of the limb were characteristic of

leprosy. There were more or less atrophy of the foot and also of the hand, but very little loss of sensation. He said there were three types of leprosy, and gave the differential symptoms minutely. The question of contagion was interesting in these cases. In some countries leprosy undoubtedly is contagious, but in his opinion, this is not true in our climate. There are several cases in this city all the time, and no case has been reported that has developed as the result of contact with another patient suffering from the same condition. He once saw a patient in whose case he made a diagnosis of leprosy, and she informed him that her husband had suffered from the same condition before it developed in her. In countries where leprosy is prevalent, people who have proper food and proper hygienic surroundings very rarely contract the disease. Some authorities claim that it is infectious, some that it can be conveyed only by direct contact, and some that it is a concomitant of yellow fever and malaria. Experiments have been made by having lepers breathe into a certain receptacle, and colonies of bacteria have been grown from the atmosphere into which they breathed, showing that the mucous membrane of the mouth may be the source of infection. Inoculation, as a rule, has been negative. The speaker succeeded some years ago in inoculating some persons with leprosy, but there was some doubt about its being a leprosy family, so that experiment proved nothing. Some guinea-pigs were inoculated with tuberculous nodules, and eight months later bacilli were found in the kidney, spleen, and liver.

The duration of the disease varies according to the form. Some patients live twenty years after the symptoms appear. The patient before the Society had suffered from this condition for about nine years, and except that it was rather inconvenient for him to get about, he was not incapacitated for work.

CAST OF A BRONCHIAL TREE.

Dr. F. M. Jeffries presented a cast of a bronchial tree. He said that the cast was from a patient suffering from fibrous or plastic bronchitis. It showed the ramifications of the smaller bronchial tubes. The speaker said that it was the first specimen of the kind he had seen in a laboratory experience of twelve years, and for this reason he thought it worthy of note.

A NEW METHOD OF TREATMENT FOR FRACTURE OF
THE NECK OF THE FEMUR.

The paper of the evening was read by Dr. Royal Whitman. He called attention to the fact that it was generally admitted that the results of treatment of fracture of the neck of the femur are very unsatisfactory. These results are to be ascribed, not so much to the age of the patient or to the severity of the injury, as to the faulty conception of treatment and its perfunctory application. At present it is taught that no attempt should be made to correct the deformity of an impacted fracture, a deformity which is essentially a traumatic coxa vara; while the means employed to appose the fragments and to hold them in position, if the fracture is complete, are quite ineffectual, as demonstrated by the fact that shortening is almost always present when the treatment is concluded. He said that fracture of the neck of the femur is not uncommon in childhood and in vigorous adult life, but as it is often incomplete, it is usually classed as contusion. These cases are unrepresented in Hospital statistics.

The treatment which he had already described as applicable in childhood (*Annals of Surgery*, November, 1902), he would, on further experience, now urge as one of routine in all favorable cases. In principle, it is a method of replacing the depressed neck, if the fracture is incomplete or impacted, and of apposing and retaining the fragments in approximate apposition if it is complete. If the fracture is impacted, the patient having been anesthetized, the extended limb should, under traction, be slowly abducted. As in every instance in which depression of the neck is present, abduction would be checked when the neck comes into contact with the upper border of the acetabulum, further forcible deduction by means of the leverage of the extended limb on the fulcrum of the acetabulum would disengage the impaction and elevate the neck. At the limit of normal abduction a long plaster spica bandage should be applied. If the fracture is complete, the shortening should be reduced by traction and counter traction. The limb should then be abducted, and by downward pressure on the trochanter, the outer fragment may, if of sufficient length, be pushed beneath the rim of the acetabulum. Abduction should then be increased until the trochanter is brought into

contact with the side of the pelvis so that upward displacement is impossible. In this attitude it is evident that muscular contraction becomes powerless to induce deformity, while the firm support of the plaster bandage permits necessary movement without danger of displacement. The details of the treatment and the after-treatment were described and the modifications that might be necessary to meet varying indications. In closing, the reader again called attention to the large number of patients, still youthful or in vigorous old age, who, because of failure of diagnosis and inefficient treatment, were in great degree disabled by this injury. He said that the limitations of weakness and old age so often urged as an excuse for the present ineffective and perfunctory treatment should not be extended to this class, but that one should attempt to apply here the principles that are admitted being essential to the successful treatment of fracture in other situations.

Dr. J. A. Bodine opened the discussion of this paper. He said that it was particularly interesting to him because he had control of practically the largest fracture service in the country at St. John's Hospital, Long Island City. Some years ago he had called to see a patient who, as far as he could make out, had sustained an injury to the patella ligament, and there was relaxation between the patella and its insertion. He had never been told that fracture of the neck of the femur was a condition of young life, and sent the patient to Dr. Whitman, who made the diagnosis. Most of the patients were forty, fifty, and even sixty years of age, who were included in the speaker's service, and were thin and emaciated for the most part, and an anatomical cure was more than could be hoped for. If the patients could get about with the limb supported by a high shoe, the surgeon had to be content, but in future, the speaker would be glad to try Dr. Whitman's method. About two years ago Dr. Maxwell reported several cases in which he put on twenty to thirty pounds pressure to reduce the shortening, and in addition lateral extension of some ten pounds, as he claimed that in case the neck of the bone was pulled down, a better position resulted. He showed four post-mortem specimens secured from patients who died some years after this method was applied, which showed almost perfect union. Dr. Whitman claimed these ends could be brought into apposition. His

method possessed a great advantage over others. But in young people why not use direct operative interference? The surgeon can cut down, certainly, on the great trochanter.

Dr. Alexander Lyle said that he was surprised that the writer of the paper advocated the breaking up of an impacted fracture. He thought that the age and general physical condition of the patient should be taken into consideration before adopting it. He was sure that if the general condition was unfavorable, it would not be justifiable to release the impaction. He had noticed that fractures of the neck, near the trochanter, are almost invariably impacted, and those near the head of the femur are not impacted, which might be an important point in diagnosis.

In reply to Dr. Bodine, Dr. Whitman said that twenty-six cases of fracture of the neck of the femur in childhood had come under his observation, and that in a single year he had seen five cases in young adults in not one of which had the diagnosis been made. He was not ready to admit that because a person was sixty years of age, treatment was useless. Direct operative intervention is, of course, a treatment of last resort, that may be applied only under favorable conditions. It, however, might be the treatment of selection for partial epiphyseal separation in young subjects.

Cocaine Habit Among Negroes—At the annual Hampton Negro Conference, which began its sessions July 15, the question of the growth of the cocaine habit among negroes was discussed by Dr. J. W. Prather. After a report on the diseases to which the negro is liable, he called attention to the alarming growth of the cocaine habit, and pointed out the fact that upwards of 200,000 negroes are addicted to the cocaine habit or the use of other narcotics. In a recent number of the *Medical Press* reference is made to the increasing spread of the cocaine habit, and its prevalence among negroes is commented upon. —*Boston Med. & Sur. Jour.*

CORRESPONDENCE.

THE TRANSIT OF BEHRING STRAIT.

NOTE :

New York, Feb. 5, 1904.

Sir: I send you some opinions called forth by my article "Origin of Quaternary Man in the Western Hemisphere," (ST. LOUIS MEDICAL AND SURGICAL JOURNAL, Nov. 1903), written by W. Cochran, a Supreme Court Stenographer for 33 years.

A. S. A.

MY DEAR DR. ASHMEAD :

My proposition is that land communication between the Eastern and Western Hemispheres by way of an Atlantis, the sunken continent of tradition, does not preclude the possibility, nor the probability, of a land transit from Asia to America by way of Behring Strait, the remnants of whose people are now to be found in our Arctic regions, and whose arrival upon our hemisphere ante-dated a migration from Europe.

In a recent lecture. Sverdrup states that he discovered, near Behring Strait, in mound-like elevations which attracted his attention, animal bones and implements of the chase and of the household; and that these traces extended to Lancaster Sound; and he believes that when the ice in some former period of its history afforded favorable conditions the ancestors of the present Arctic Highlanders and Esquimaux left the inhospitable shores of the present Siberia and betook themselves to the more congenial region of Ellesmere Land and Smith's Sound.

These people would naturally remain among the conditions to which they had been subject from time immemorial, having need to abide where were accessible creatures who furnished them with food, clothing and weapons with which to sustain themselves against their severe environment. It is true that about one thousand years ago a large colony of Norsemen went to Iceland, and to Greenland, and remained there. That may account for the antipathy which Mr. Peary observed on the part of the Arctic Highlanders towards the people of the more southerly portion of Greenland, it being well known that the light-colored races antagonize all with whom they come in contact. Their intrusion and absorption into the people below may be presumed to have created resentment and have established an aversion which has become traditional. But, this being the case, it goes, so far as it goes at all, to establish the proposi-

tion that a people were there who were hostile to the arrival of another type of man.

I understand that the Ice Cap had its extreme feet at latitude 40, Long Island being one of the terminal moraines; and that it receded rapidly to the northwest, reaching the Pacific Coast at about Vancouver—that it was not uniformly down to the 40th parallel.

Professor Geike is quoted as saying that the glacial period influenced contemporaneously the climate of Europe and North America; greater in North America than in Europe. This makes no mention of Asia—excludes it from the superincumbent ice mass (my reading has not shown any ice cap in Asia), and will go to reinforce an inference that as it approached Asia from the longitude of New York it began to leave the 40th parallel of latitude, and thus go to confirm the theory of a more or less rapid recession toward Behring Strait. Therefore, in the orderly course of the retreat of the ice, access to our Arctic Coast regions would have been sooner afforded to the people of Asia than to a Ligurian migration by way of the Atlantis.

In this connection, I will state that Dr. Brinton's language, it seems to me, must by its phraseology (page 7, *Origin of Q. Man in W. Hem.*) be deemed not to include Alaska, the Arctic Archipelago, the western coast of Greenland, nor, for that matter, the tribes around Hudson's Bay and between there and the Arctic Coast.

For further evidence of the rapid recession of the line of the ice cap, I may say that I have not observed any trace of its presence on the Sierra Nevada mountains, nor have I seen any evidence of its presence over the fertile foot-hills of that range, nor in the valleys north of San Francisco. Certainly none south. The rich valleys appear to have been long under a quiescent inland sea, which distributed the silt which came down; while the foot-hills showed such evidence as would be left by turbulent and heavy running mountain torrents in the moving of pebbles and small boulders. It is true that I have never been particular to notice the State geologically. But I do know that the Sierra Nevadas are rugged, sharp, granitic rock, showing no rounding off and striæ, which is the peculiar feature of all fixed rocks over which the cap has moved. Nor have I seen

striæ anywhere there, in latitude 42, San Francisco being at latitude 38. Had there been no recession of the line of the ice cap from latitude 40, which it reached here, there would have been, by all fair reasoning, evidence of its presence in the latitude of the Sierra Nevadas just mentioned.

If the conditions of cold were not so severe in Europe as in America, why should a Ligurian migration press along the foot of the ice cap on this hemisphere, for it would seem to be, upon the acknowledged theory of warmer conditions in Europe, an unavoidable presumption that there was no ice cap in the neighborhood of the shores of the Mediterranean, latitude 45, from which region the Ligurians came.

If the Ligurians would not seek the frigid precincts of the western hemisphere for the reason that they would thus encounter an environment more severe than that to which they had been accustomed, so also the people of the far north would not leave the whale, the walrus and the soft-feathered birds for a region with which they were not acquainted, and where they would have to undergo the distress of adapting themselves to a new surrounding. Man always travels along the line of least resistance, unless moved by a higher impulse than that of supplying his physical wants; and when located either north or south of the temperate zones does not carry away and impart his institutions. Therefore there would be found no trace of Asiatic transfer in even the most extreme north of the Ligurian migration.

Man has been upon this globe far longer than the world of science is prepared now to concede. The fierce North American Indian, unknown as to his origin, has destroyed all the people that he came upon.

But it has never been claimed that he reached the Arctic Coast, so far as I know.

It is not unreasonable to bear in mind the almond eyes of the Esquimaux, and of the Digger Indians of California, now about extinct, when one considers the great extent of territory that separated their habitat from the regions that would be reached by the Ligurian migration from Europe, and the ranges of mountains which cut off the very people under consideration, the Arctic Asiatics, from wandering from their solid ice, which would afford them better subsistence and firmer footing than would the watery and mushy territory below.

In view of all this, it would seem that the supposition that some men (perhaps the original man, as far as this hemisphere is concerned) came from Asia cannot be precluded.

If the contention is simply that the culture of ancient Mexico, as well as that of ancient Peru, could not have come by way of Behring Strait, it may be readily granted.

ATLANTIS.

If the foregoing reasonings and conclusions are correctly based and given, the theory that search for the antecedents of present man in the north temperate and south temperate zones should be made in the La Plata is supported.

While comparison of flora and fauna are deemed by scientists to be of the highest value in determining the former relativity towards each other of now widely separated regions, a glance at the map will show a wonderfully strong suggestion that Africa and South America were rent apart, Cape St. Roque apparently dragged from what is now the Gulf of Guinea, and the overhanging western portion of the continent having been taken from the great indentation in the shore line of the United States.

May not this represent the place of the lost Atlantis?

Thus Europe and America may well be deemed to have been nearer to each other than they are now, or, indeed, in contact. And if in these shore lines is contained a suggestion of contact, how much stronger is the suggestion at Behring Strait?

Thus it is that in the La Plata is to be expected the remains of the earliest people that can now be traced leading up to our civilization.

But it does not preclude the possibility and the probability that the characteristic human life at Smith's Sound had for its forbears a migration across Behring Strait.

Under the theory of the procession of the equinoxes, and the consequent approach of another ice cap, it would seem that all the knowledge of the present day, and all that subsequently to be acquired, is to be lost in the great slow crush and the later hurry and scurry of the elements at the next ice age.

Very truly yours,

ALBERT E. COCHRAN.

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EDITORIAL.

PALATABLE, YET EFFICIENT.

To him who has devoted any time to the subject, it is very apparent that, in the last fifty years, pharmacy has made vast strides. These have been not only in the direction of the introduction of many valuable synthetic products, but also in the way of making many of the older Galenical preparations agreeable to the palate of the patient, eliminating much of that which was nauseous and practically inert. Pleasant remedial agents is the shibboleth of the modern pharmacist, and the constant effort has been bent in this direction in possibly too strenuous a manner, and this possible fact has dawned upon the minds of some when they advertise their preparations as being palatable, yet efficient. It was an old trick with the ordinary druggist to employ aromatics to disguise the odor and taste of castor oil that was to be administered to children, as it was

later on to render less nauseating the potions to be taken by women. It is a common belief to this day that medicine is not palatable, no matter under what form it is produced. An equally wrong idea is that the worse a medicine tastes the more efficient it is.

These erroneous ideas are probably what gave its origin to the expression "palatable yet efficient." Some people do not want to take sweets or lemonade, and insist upon a remedy possessing a certain "tang." These are the ones who are rapidly disillusioned when they take a neat-looking gelatine or sugar-coated pill and chew it to see if it is a jujube or confection, and suddenly taste the bitter of strychnine or the nauseating taste of phosphorus. They then come to realize the fact that our modern manufacturers of pharmaceutical preparations have made advances commensurate with those in other arts. Yet, whilst many advances have been made in this direction, it still remains a fact that there are efficient remedies which cannot be made palatable if they are to retain their efficiency. No matter what is combined with them, provided that the ingredients are not antagonistic, that same bad taste will persist. On the other hand, it is often necessary to add a synergistic, which, whilst adding to the efficiency of the remedy, will impart a most disagreeable odor or taste.

The physician prescribes his medicines to produce certain effects, and he may rightfully insist that he cannot make his remedies suit the idiosyncrasies of his patients. He cannot adapt them to all the follies of those who need remedies. The cases are not few in which patients have declared that powders of sugar of milk burned and produced intense gastric pain. Some patients have complained that pills made of bread crumbs were intensely bitter, and so on *ad nauseum*. The only way to do is to prescribe remedies in as pleasant a form as is compatible with their efficiency, and to endeavor to disabuse the minds of patients of many of their preconceived ideas. It is certainly a difficult task to make reasonable beings out of such as are ill and querulous, but a little patience and kindness combined with soothing ways will accomplish much. And, after all, that is the true function of the true physician in addition to prescribing pills and potions and that "nasty stuff" called medicine.

BOOK REVIEWS.

International Clinics. A Quarterly of Illustrated Clinical Lectures, and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. KELLY, A.M., M.D., with the Collaboration of WM. OSLER, M.D., JOHN H. MUSSER, M.D., J. B. MURPHY, M.D., JAS. STEWART, M.D., A. MCPHEDRAN, M.D., THOS. M. ROTCH, M.D., JOHN G. CLARK, M.D., JAMES J. WALSH, M.D., J. W. BALLANTYNE, M.D., JOHN HAROLD, M.D., EDMUND LANDOLT, M.D., RICHARD KRETZ, A.M. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Liepsic, Brussels, and Carlsbad. Vol. IV., Thirteenth Series. 1904. 8vo. pp. 321. Illustrated. [Philadelphia: J. B. Lippincott Co. 1903. Price, \$2.00 net.

This volume makes a fitting close for the thirteenth series of this remarkable publication, which made such a successful beginning, and has never lost any of the excellence with which it began, but rather added to it so that each successive volume has become a marked increment in the production of such a successful whole. We have had occasion to commend the publication as an entire product in many instances, and the value of its contributions in each successive issue has been pointed out to our readers. It seems to be merely a repetition of what has been already said, to note that the present volume, when examined critically, is superior to its predecessor, and yet it is nothing but a mere statement of fact. The latest advances and observations of the present masters in medicine and surgery are given to us in especially prepared articles, and clinical lectures presented in such a manner as to be easily understood by the readers. In fact, some of the most abstruse problems in pathology are so presented that a mere tyro almost can understand them.

This volume opens with a very carefully prepared article on the Clinical Features and Treatment of Ulcer of the Stomach, by Dr. James Tyson. The Treatment of Pneumococcic Infection of the Lung or Croupous Pneumonia forms the subject of Dr. John H. Musser's paper, and the Treatment of Chronic Bronchitis is that of the contribution of Dr. Thomas A. Clayton. Dr. Louis Jullien, the great syphilologist of Paris, writes a full and thorough article on Subcutaneous Injections of Mercury for Syphilis. In the Department of Medicine are to be particularly

noted; Some Clinical Aspects of Diseases of the Kidneys by Dr. Henry Baird Farill. The Clinical Manifestations and Treatment of Chronic Nephritis by Dr. Louis Fangeres Bishop; Angioneurotic Edema, its Clinical Varieties, with Typical Cases by Mr. James Burnet, this being a very thorough and well-written study; Syphilitic Ateritis by Dr Robert B. Preble, which is both valuable and instructive. There are other excellent papers. In the Department of Surgery the first and most marked article is on a Case of Interilis-abdominal Amputation for Sarcoma of the Ilium, and a Synopsis of previously reported cases by Drs. William W. Keen and J. Chalmers De Costa. A Surgical Clinical Clinic embracing a number of cases by Dr. Nicholas Senn form an interesting contribution; The Radical Cure of Prostatic Hypertrophy is contributed by Dr. J. Albarran, and in this he gives us his opinion of, and experience in different methods; Stricture of the Esophagus by Dr. Martin F. Coomes is a valuable contribution to the subject; An article which is very timely is that by Messrs. William H. Battle and E. M. Corner, in the Differential Diagnosis of Acute Abdominal Conditions which require Surgical Treatment. Dr. William C. Dugan is represented by a clinical lecture on several surgical cases.

In Gynecology and Obstetrics there are four papers, the principal ones being Hysterectomy in Acute Puerperal Infection by Dr. A. C. Pinard, and Gonorrheal Vulvitis, its Dangers and Treatment by Dr. Louis Frank. Neurology is represented by Hemiplegia in the Young and in the Old by Dr. Alexander James and a Clinical Lecture on some cases by Dr. Daniel R. Brewer. Dr. John Lincoln Porter is represented in the department of Orthopedics by a clinical lecture on congenital dislocation of the hip; congenital club-foot; etc. Ophthalmology is represented by two papers: one in the Preparation of the Patient for Cataract Extraction by Dr. Casey A. Wood, and the other one on The Diagnosis and Treatment of Acute Glaucoma by Dr. E. Valude. The concluding article in Pathology is on The Present State of our Knowledge of Immunity by Dr. Joseph McFarland. He gives a very good and thorough exposé of Ehrlich's theory.

The articles are well illustrated in this volume, and all the articles are full of interest and very useful. We have been more than ordinarily pleased with a perusal of its contents, and can recommend it to our readers.

Social Diseases and Marriage. Social Prophylaxis. By PRINCE A. MORROW, A.M., M.D. 8vo. pp. 390. [New York and Philadelphia: Lea Brothers & Co. 1904. Price, \$3.00 net.

This is the first book in English devoted to the subject of which it treats, and no better teacher could have been chosen

for this work than the writer of the excellent monograph before us. He has fearlessly attacked this subject in medical deontology in a manner which shows him to be a complete master of it, and he has succeeded in what promises to be a classical reference book for many years to come. It will particularly appeal to all those who have had any considerable experience in the treatment of venereal diseases in both private and hospital practice. The subject is approached from all sides, and all its possible aspects are considered by one who has proved himself a thorough master of that concerning which he writes both from a scientific, and a legal and social point of view. He has here laid bare one of the festering sores of society, and whilst advising the physician to do all in his power to repress these diseases, and do his utmost to prevent the infecting and propagating them, he is equally severe in insisting upon the propriety of not divulging any professional secret. In fact, he reviews the questions presented before and after marriage in relation to venereal diseases, and gives advice of the best sort, not forgetting directions of such value that a layman as well as a physician may profit by it. The author treats his subject from a very logical point of view, and whilst he discusses all the various methods which have been tried to regulate prostitution, he justly regards them as inadequate, and with equal justice looks upon the suppression of this evil as impossible. What he does consider not only possible but feasible is the repression of the marriage of two individuals one or both of which are syphilitic. He goes on to show that the off-spring of heredo-syphilitics offer some inadequates dependent upon their procreators. He thus roughly goes over the ground of syphilis and marriage, which was treated of in such a masterly way by Fournier, and which he translated from the French. A subject which he considers fully and at length, and to which no great attention has been paid until of late years is that of gonorrhea and marriage. He very justly points out how women suffer mostly from this as instanced by the large number of pelvic diseases with which they are affected by the gonorrhea of their husbands. He very justly points out the dangers which are brought on by the gonococcus of Neisser, and the greater attention this has brought to its influence, and the ravages which it may cause. He, in no sense, exaggerates as may be attested to by any one who has had any clinical or pathological experience in connection with gonorrhea. We have no doubt that the day is not very far distant when that disease will be classed with the infectious systemic diseases, and it will be regarded as equal to syphilis in seriousness if not more so. Gonorrheics will find it a more difficult task to enter the marital state than syphilitics when the disease is better understood.

The author keeping in mind the unlawful relations between the sexes which have come to be known as the "social evil," has adopted the term "social diseases" to indicate the infections most often acquired in that manner, and he might, with equal justice have characterized as the "Social blot," the marriage of a tainted individual to one clean in every respect. We have no patience with individuals so devoid of honor, decency, or probity as to inflict such vile diseases upon innocent victims through legitimate marital relations, and involving in the consequences thus entailed not only the health, but the peace, honor, and happiness of the entire family. The consequences do not cease here, but continue for generations with the final prospect of an ultimate depopulation of a serious character.

Every physician, and for the matter of that, thoughtful adult should read, and not only read but study the book before us. No student of sociology can afford to let its lessons pass by untested, and above all no physician has a right not to get well acquainted with its teachings, and heed them as he is in duty obliged to do. We have not seen a better book on the subject in French or German than the one before us, and it will, without doubt, be received with much favor abroad as it certainly deserves to be.

O-D.

A Manual of General Pathology. For Students. By SIDNEY MARTIN, M.D., F.R.S., F.R.C.P. 8vo. pp. 502. With numerous Woodcuts from micro-photographs and other Illustrations including many in Colors. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$4.00 net.

This is a work for which a demand has certainly existed for quite some time: for, it is a generally conceded fact that nearly all the works on pathology which we possess are translations from the German for the most part, and although there can be no question that they are of a high order of excellence, it must be conceded that there is much satisfaction in reading and studying a thorough work which has been originally written in English. The author of the book before us is known as the Professor of Pathology at University College, London, and the volume presented to us here is based on the lectures which he has delivered during the past five or six years. It is for this reason that it is peculiarly adapted to the wants and needs of students of medicine. And, it may be added with equal truthfulness that its value will be found equally as great by practitioners of medicine who have grown rusty on this subject.

The author begins by telling us that general pathology is a study of the processes of disease, and this may be regarded as the plan upon which the entire subject is handled. A glance

at the table of contents of this work will demonstrate its thoroughness and the complete manner in which the author handles his subject. Chapter 1. is devoted to inflammation including phagocytosis. In Chapter 2. we are given the subject of pyrexia. The next four chapters are concerned with infection, and this is treated of in a very complete and systematic manner. Immunity is taken up, and in this we find the latest views on the subject ventilated, and Ehrlich's Theory is very well explained. In Chapter 7. we are given the degeneration and regeneration of cells and tissues. In the two succeeding chapters changes in the circulation are taken up and considered. The changes in respiration in diseases are noted in Chapter 10. Changes in the blood in disease occupy three chapters, and are certainly very interesting as this subject is now an important one in connection with the diagnosis and treatment of many diseases. Hemorrhage and pigmentation, the effects of disease of the liver; the effects of disease of the kidneys; and the effect of disease of the ductless glands of the body occupy successive chapters, and in the last the author speaks of the action of thyroid extract and that of suprarenal extract, Chapter 18 is devoted to changes in metabolism, a subject which is attracting much attention on the part of the more advanced clinicians. The concluding chapter on changes in the nervous system in disease will be read by all with a great deal of interest. The author is certainly in favor of the neuron theory, if we are to judge from his description of neurons and their nutrition.

This book has been prepared and written with the utmost care, and there is no doubt of its reliability when we take into consideration the well known conservatism which all British authors manifest in their printed writings. The author of this work in pathology is not hesitating, but he very rightfully considers it but proper to insist only on those things which are known and successfully demonstrated. He does not advance a number of theories and hypotheses which it would be difficult to successfully sustain, and it is this very mild form of conservatism which will recommend it to all thinking medical men.

The publishers have certainly made a handsome volume of this work. The print and paper are exceptionally good, and the illustrations, 127 in number, are very well drawn. Many of these are in colors, thus adding to their value as demonstrative factors in elucidating the text. Both teachers and students of general pathology will find this work a useful one for study as well as a valuable reference book to keep in their libraries. We can heartily commend it to the friendly consideration of all medical men.

Diseases of the Nervous System. A Text-Book for Students and Practitioners of Medicine. By H. OPPENHEIM, M.D., Translated and Edited by EDWARD E. MAYER, A.M., M.D. Second American Edition, Revised and Enlarged. 8vo. pp. 953. With Three Hundred and Forty-Three Illustrations. [Philadelphia and London: J. B. Lippincott Company. 1904. Price, cloth, \$5.00 net.

The subject of Neurology has certainly been constantly receiving additions like all departments of medicine, and it becomes absolutely necessary from time to time to revise the best written and most thorough works. The present one, since its very appearance, has been looked up to as both reliable and authoritative. Its author, the well known professor of the Berlin University and former assistant of Westphal has very wisely deemed it expedient to revise his work twice, and the book before us, the second American edition translated from the third German has been very well edited by its translator himself, a well known neurologist of Pittsburg. We can note throughout this edition a number of modifications and of additions all of which go to render the book more complete as well as more exact. In fact, it almost seems like an entirely new work, and those who do not possess the first edition cannot go far wrong by obtaining this one, as it is particularly adapted to those for whom it has been intended and written. The author knows well what the needs of others in neurology are and he has supplied them.

The method to which the author of this work has adhered is to lay particular stress on diagnosis and prognosis, therapeutics entering for its full share of consideration. Naturally pathology comes in for a full share of consideration, and the microscopic pictures of the various forms of degeneration as well as of the different pathologic changes are numerous and original. Not alone this, but the illustrations of the numerous nervous diseases are sufficient in number to give the student an adequate idea of the subject on which the author writes. This book in itself comprises a full course of instruction of no mean value. In our opinion the book is well worthy of adoption as a text-book by teachers of the subject even if in no other capacity than as a supplementary one to cover the subject with a greater fullness and detail than we find in the ordinary ones. As a guide to a thorough course of lectures it is certainly unexcelled. It is hardly necessary to enter into details in a review of this volume, and it may be sufficient to note that, in the first place, it is divided into two parts. The first or General Part is devoted to methods of examination, general symptomatology, and objective examination. In the examination that of the mental state is entered upon as an aid in formulating a diagnosis. The second or Special Part is given up to a consideration of the

different diseases of the central and axial systems. Although the author does not completely discard the neuron theory looking upon it as necessary for certain investigations, he is not enthusiastic over it and his support of it is inclined to be rather conservative.

As we have already stated above the work before us is one of a superior character, and it will be read with avidity by all neurologists and should be carefully studied by students and practitioners of medicine. The publishers have made a handsome book of it, printed on good paper in a superior manner, and with illustrations of the best execution. We heartily commend it to all those in need of a work on diseases of the nervous system.

Transactions of the American Dermatological Association, at its Twenty-Seventh Annual Meeting held at Washington, D.C., May 12, 13, & 14, 1903, in connection with the Sixth Triennial Session of the Congress of American Physicians and Surgeons. Official Report of the Proceedings by CHARLES J. WHITE, M.D., Secretary. 8vo. pp. 213. Illustrated. [New York: The Grafton Press. 1904.

This is beyond all doubt the best volume of Transactions issued up to the present time by the American Dermatological Association. The work now done by the several members is of a better quality and higher standard now than it was in former years. This is clearly evidenced by the volume before us, which is certainly a valuable one for all those who are interested in cutaneous medicine and surgery. The papers all show unusual care as well as study in their preparation, and the questions of to-day in dermatology are taken up and discussed in a very clear and thorough manner. Including the President's address by Dr. John T. Bowen, the volume contains eighteen papers, the majority of which are very well illustrated by well-executed half-tone engravings. Throughout we observe an evidence of the pains taken by the members to present papers which will compare with the best produced in their chosen field of medicine, and an examination of the present volume of Transactions will show that they have acquitted themselves very well of their self-imposed task.

As usual the combined returns of the members are, in the highest degree interesting and contain much in the way of statistical information on the number of cases of skin diseases and their comparative frequency. The total of the cases is steadily growing larger and larger year by year an evidence of the fact that the public in general is seeking aid for skin diseases from those who are particularly qualified to render it. As a further evidence of the greater interest taken in the subject may be mentioned its fast growing literature which begins to vie in its

proportions with that of any other special branch of medical study.

We cannot very well enter into an analysis of the contents of the volume of Transactions before us. All the papers are well printed, and the illustrations are produced in a very good manner on plate paper. It may be only necessary to state that the volume is reprinted from the pages of the *Journal of Cutaneous Diseases including Syphilis*, which is the official organ of the American Dermatological Association to make our readers understand the extra paper and press work which characterize the volume. Taken altogether, it is a very creditable volume, and we are certain that it will do much in the way of gaining the high opinion of European dermatologists in regard to the thoroughly high class of work done on this side of the Atlantic. The only cause for regret that we have is, that many of our younger men do not take up the study of cutaneous medicine and surgery, as we are certain that they would find this a most fertile field to cultivate and equally as fascinating as those they prefer.

Much of the credit of getting out the volume is due to Dr. White, the Secretary of the Association and editor of the Transactions. He has certainly well performed his task, and in a manner reflecting credit upon the Association. The Grafton Press which has issued the volume has done so in the best style of the printer's art, and has succeeded in producing a volume, every possessor of which will give it a prominent place on his book-shelves.

The Blues (Splanchnic Neurasthenia). Causes and Cure. By ALBERT ABRAMS, A.M., M.D. (Heidelberg), F.R.M.S. 12mo, pp. 240. Illustrated. [New York: E. B. Treat & Company. 1904. Price, \$1.50.]

We have all had occasion to meet individuals who complained of having the blues. Some will state that they feel "as blue as indigo," and it is more frequently observed in young females, although the reviewer has observed it in well built, muscular males in the thirties who felt depressed at an unexpected financial disaster or some catastrophe of a similar character. The non-medical public is very apt to laugh at such a condition, little knowing, or suspecting less, that it is a diseased condition. Those who have studied the trouble are ready to note the derangement which exists principally in the nervous system. Those who are healthy in mind and in body cannot either understand or appreciate the true condition of affairs which is, in reality, a serious one. Some medical men who will not give the condition that amount of attention necessary to its proper elucidation will call it vapors, hysteria or a beginning of melancholia, all of which are incorrect. The whole

subject is one fraught with great interest and now that such a rapid pace has been set by modern civilization, a larger number of individuals is affected by this condition than ever before, the result being that every practicing physician encounters such in his practice and should certainly know what to do to relieve such patients as apply to him for treatment. Neurologists are certainly acquainted with the trouble but all practitioners of medicine should also possess an adequate knowledge of it.

In writing the book before us its author has done the medical profession a real service. He has not only thoroughly considered the conditions from every point of view but he has also given that most valuable part, its treatment. He begins by telling us what "the blues" is medically speaking. An attack of the blues is an attack of acute neurasthenia or an aperiodic aggravation of chronic nervousness. Heredity and environment which have much to do with the causation of the trouble may be effectually fought by personal effort. Among the primary causes are sexual neurasthenia, uric acid neurasthenia, and others such as worry, the abuse of alcohol. It must be admitted that the trouble is essentially splanchnic neurasthenia. In discussing the subject, the author gives us the symptoms and *pari passu* we find the only rational treatment outlined. He does not advocate drugs or such inefficient measures but gets at the root of the disturbance by means of physiologic methods. There is no doubt that this is the proper course to pursue and the present modern tendency is to avoid drug medication and resort to purely physiologic therapeutics. This book is one worthy of close study by physicians, who will find much in it to their advantage and that of their patients.

The publisher has made a nice volume of this little monograph and has very appropriately bound it in blue. We bespeak a successful sale for it, as it certainly deserves it.

The Self-Cure of Consumption without Medicine. With a Chapter on the Prevention of Consumption and other Diseases. By CHAS. W. STANLEY DAVIS, M.D., Ph.D. 12mo., pp. 176. [New York: E. B. Treat & Co. 1904. Price, 75 cents.

This small book is one which is especially adapted to the non-medical reading public, as it does not deal with the technicalities of medicine. It is written in a very clear manner such as may be easily understood by any person of average intelligence. The author begins by a general consideration of tuberculosis of the lungs, and follows with some physiological facts concerning nutrition, assimilation, and the proper oxygenation of the blood. He shows the functions of exercise and pure air in their role of making tissues better in quality and non-resistant to outside influences. This very naturally leads

to the main topic, that of self-cure in consumption. Naturally the rule of climate in the effects it exercises in the production of a recovery from pulmonary tuberculosis causes the appearance of a short chapter on the different localities best adapted to consumptives and to their improvement. There are several appendixes given which severally deal at greater length upon some of the ideas advanced in the body of the book. The author is unalterably opposed to the use of alcoholic stimulants in the treatment of consumption. Whilst many members of the medical profession will not agree in this view, we are certain that all will be in accord with the author when he says, "In many patent medicines which are largely consumed throughout the country by all classes of people, there is a percentage of alcohol which puts them on a level with rum and whisky as intoxicants," and which has won many testimonials for them, he might have added. The book is one which every physician should recommend to his consumptive patients for perusal and study. The publishers have made the price so moderate that all can afford to buy it.

The Management of Lateral Curvature of the Spine, Stooping, and the Development of the Chest in Phthisis. By E. NOBLE SMITH, F.R.C.S., Edin., etc. 12mo. pp. 33. [London: Smith, Elder & Co., 15 Waterloo Place, S.W. 1904. Price, 2/6.

The present is another one of Mr. Smith's little books, and like everything which he writes it is full of the most useful suggestions and methods. In the present contribution we are presented with a finished presentation of the subject of the management of lateral curvature of the spine and stooping. The author not only advocates the removal of existing causes, but muscular exercises, massage, and mechanical treatment as well. He is in favor of apparatus, and shows how prejudice has grown against this form of treatment on account of clumsy apparatus. He is much in favor of Chance's splint, which he regards as constructed upon sound physiological principles. The illustrations which are given of cases before and after the use of this simple apparatus show marked improvement after a very short time in its use—marked cases of scoliosis show a straight spine and an erect posture both of which should prove a source of satisfaction to the surgeon and of comfort to the patient. The last two chapters of this interesting little book are devoted to the development of the chest and free ventilation of the lungs in phthisis, and other morbid conditions of the respiratory cavity. The author very properly insists upon a free distribution of air throughout the lungs, and for this purpose he looks upon exercise as of the highest value. If necessary Chance's splint may be worn to prevent the occurrence

of the stoop, and as it does not interfere with proper exercise, it will bring about good results in connection with proper food and dress such as does not hamper the individual.

The Complete Medical Pocket Formulary and Physician's Vade Mecum. Containing upwards of 2,500 prescriptions. Also a special list New Drugs, with their Usage. Collected for the use of Practitioners by J. C. WILSON, A.M., M.D. Third Revised Edition. Long 24mo. pp. 268. [Philadelphia: J. B. Lippincott Co. Price, \$1.75; thumb index, \$2.00.

This is certainly a handy book for those in need of formulas, and in addition to these it contains a goodly number of tables which cannot but prove to be most valuable for ready reference. As the form of the book is such that it can be easily carried in a coat pocket its practical utility is very apparent. The book not only contains a large number of printed prescriptions, but it is also liberally interleaved with blank pages to permit its carrier to insert such other recipes as he may have found valuable or which he may desire to employ on some future occasion. The edition with a thumb index is of course the better one to have for convenience in referring to its pages.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Social Diseases and Marriage. Social Prophylaxis. By Prince A. Morrow, A.M., M.D. 8vo. pp. 390. [Philadelphia and New York: Lea Brothers & Co. 1904. Price \$3.00 net.

Are we to have a United Medical Profession. By Charles S. Mack, M.D. 12 mo. pp. 44. [La Porte, Ind.: Published and for sale by the Author. 1904. Price, 25 cents.

The Blues (Splanchnic Neurasthenia). Causes and Cure. By Albert Abrams, A.M., M.D., (Heidelberg), F.R.M.S. 12mo. pp. 240. Illustrated. [New York: E. B. Treat & Co. 1904. Price, \$1.50.

The Self-Cure of Consumption without Medicine. With a Chapter on the Prevention of Consumption and other Diseases. By Chas. H. Stanley Davis, M.D., Ph.D. 12 mo. pp. 176. [New York: E. B. Treat & Co. 1904. Price, 75 cents.

The Management of Lateral Curvature of the Spine, Stoooping, and the Development of the Chest in Phthisis. By E. Noble Smith, F.R.C.S., Edin. etc. 12mo. pp. 133. [London: Smith, Elder & Co., 15 Waterloo Place. 1904. Price, 2/6.

A Manual of General Pathology. For Students. By Sidney Martin, M.D., F.R.S., F.R.C.P. 8vo. pp. 502. With numerous Woodcuts from micro-photographs and other Illustrations, including many in Colors. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, 4.00 net.

Diseases of the Nervous System. A Text Book for Students and Practitioners of Medicine. By H. Oppenheim, M.D. Translated and Edited by Edward E. Mayer, A.M., M.D. Second American Edition. Revised and Enlarged. 8vo. pp. 953. With 343 Illustrations. [Philadelphia and London: J. B. Lippincott Co. 1904. Price, cloth, \$5.00 net.

The Complete Medical Booklet. Formulary and Physicians Vade Mecum. Containing upwards of 2,500 prescriptions. Also a Special History of New Drugs, with their usage. Collected for the use of Practitioners by J. C. Wilson, A.M., M.D. Third Revised Edition. Long 24mo. pp. 268. [Philadelphia: J. B. Lippincott Co. Price, \$1.75; thumb indexed, \$2.00.

Transactions of the American Dermatological Association at its Twenty-seventh Annual Meeting. Held at Washington, D.C., May 12, 13, & 14, 1903, in connection with the Sixth Triennial Session of the Congress of American Physicians and Surgeons. Official Report of the Proceedings by Charles J. White, M.D., Secretary. 8vo. pp. 213. Illustrated. [New York: The Grafton Press. 1904.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by A. D. J. Kelly, A.M., M.D., with the Collaboration of Wm. Osler, M.D., John H. Musser, M.D., Jas. Stewart, M.D., J. B. Murphy, M.D., A. McPhedran, M.D., Thos. M. Rotch, M.D., John G. Clark, M.D., James J. Walsh, M.D., J. W. Ballantyne, M.D., John Harold M.D., Edmund Landolt, M.D., and Richard Kretz, M.D. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Vol. IV. Thirteenth Series. 1904. 8vo. pp. 321. Illustrated. [Philadelphia: J. B. Lippincott Co. 1903. Price, cloth, \$2.00 net.

The American Practitioner and News, of Louisville, has changed its editors. In future Drs. F. W. Samuel and A. D. Willmoth will be at the helm, and to judge from their start, this popular Southern medical journal will continue to hold its own.

Are we to have a United Medical Profession? is the title of a 44 page 12mo. pamphlet, written by Charles S. Mack, M.D. This is a special plea for homeopathy, and the author is inclined to believe that there will never be a united profession until the regulars acknowledge that *similia similibus curantur* is true. We hardly think that this will occur if we are to judge of things as they now are. The pamphlet is published and for sale by the Author, La Porte, Indiana, at the price of 25 cents.

The Calcutta Practitioner has just appeared in the first city of India. It is an octavo of 32 pages, which is neatly printed on good paper. Vol. I. No. 1 is dated January, 1904, and it is one of the two medical journals published in that city. We cannot find the name of an editor, but he will doubtless reveal himself when the journal becomes a success as all indications seem to point out. *The Calcutta Practitioner* will be published monthly at 64 College Street, Calcutta, the subscription rate being five rupees annually for India, and eight shillings for foreign countries. We welcome this new addition to the journalistic flock.

Poikilothermism in Rabies.—It has for a long time been known, according to J. O. U. Barratt (*Jour. of Physiol.*, June 15, 1903), that in animals suffering from rabies, the body temperature, which is usually described as being slightly raised toward the end of the incubation period, subsequently becomes subnormal. Rabbits at the close of the disease are "poikilothermic, the body becoming cold and the rectal temperature during the last twenty-four hours of life being within a few degrees of the room temperature. This phenomenon is to be attributed to a paralysis of the heat-regulating mechanism. During this stage the respiration-rate and the heart-rate are retarded.—*Med. News.*

MISCELLANEOUS NOTES.

Cough and Restlessness in Pneumonia.—Dr. W. J. Parker, truthfully states in the January *Medical World*, that "The season for pneumonia is here," and it may be of interest to our readers to know that he has found an excellent remedy for the cough and restlessness which are such distressing symptoms of this dreadful malady in Antikamnia & Heroin Tablets. Each of these tablets contain five grains of Antikamnia and one-twelfth grain Heroin hydrochloride, and the dosage is one tablet every two or three hours according to the exigencies of the case, or at the discretion of the attending physician. We may also add, that Professor Uriel S. Boone, of the College of Physicians and Surgeons, St. Louis, also reports most satisfactory results with this remedy in pneumonia, bronchitis, and la grippe, particularly in relieving the accompanying spasmodic coughs and muscular pain.

The Treatment of Leucorrhoea.—By Lafayette Bennett, M.D., Central City, Ky. As a remedy for the local disease no agent is more trustworthy than Dermapurine. One ounce of Dermapurine to six of water and this should be injected three times daily until improvement is manifest, and then twice a day, and later once a day on going to bed. Dermapurine contains the active principles of eucalyptus and pine, boroglycerine, formaldehyde, citric acid, zinc sulphophenate, bichloride, alcohol, etc. Used in the manner already described, it quickly relieves the patient of the discharge, and the odor always so unpleasant in these cases is at once stopped. In most all cases Dermapurine will be found to be sufficient treatment in itself. Patients are pleased with the results, with the cessation of the odor, and the gradual lessening of the discharge.

A patient aged thirty-three came to me for treatment of leucorrhoea, which had been giving her much annoyance for a year. I found no constitutional vice to account for it beyond a slight anaemia. She was given some iron and Dermapurine was used in the manner already described. The patient made a prompt recovery and has had no discharge since.

Another patient, twenty-nine years old, had had leucorrhoea and slight prolapsus for a year, which she attributed to heavy lifting. She was given no internal treatment, but the Dermapurine injections were employed regularly, and she was entirely recovered in four weeks. She now feels strong and says she is in better health than for years before.

A lady, aged forty-five, had leucorrhoea of a rather profuse character, I attributed this to gonorrhoeal infection. She took only local treatment, Dermapurine injections, and made a prompt recovery.

The Medicine Man.—An elegant lithograph in eleven colors of a Medicine Man of the Sioux Indians has been sent to every physician in the United States by the Proprietors of the Tongaline Preparations and Ponca Compound.

Any physician who has not received this handsome and artistic reproduction of a famous Indian Chief can easily obtain such by writing for it to the Mellier Drug Company, St. Louis.

Ethol in Follicular Tonsillitis.—Received sample of Ethol, and have used same on a bad case of follicular tonsillitis with a complete cure in twelve hours. This is certainly remarkable, and am very much pleased with it. At present am using it on a leg ulcer with remarkable results, and I can heartily recommend it to the profession.
Chicago, Ill. H. B. HANNON, M.D.

The Cough-Sequela of La Grippe.—Dr. John McCarty, of Briggs, Texas, (Louisville Medical College) in giving his personal experience with this condition, writes as follows: "Ten years ago I had la grippe severely, and every winter since my cough has been almost intolerable. During January, 1902, I received a sample of Antikamnia & Heroin Tablets and began taking them for my cough, which has distressed me all winter, and as they gave me prompt relief I ordered an ounce box which I have since taken with continued good results. Last fall I again ordered a supply of Antikamnia & Heroin Tablets and I have taken them regularly all winter and have coughed but very little. I take one tablet every three or four hours, and they not only stop the cough, but make expectoration easy and satisfactory.

Sanmetto in Prostatitis, Urethritis, Cystitis.—I have used Sanmetto extensively in my practice for some years, and in well chosen cases have always gotten good results. I look upon it as a most valuable remedy in prostatitis, urethritis, cystitis, and in fact all inflammatory conditions of the genito-urinary tract.

Jackson, Mich.

W. J. CHITTOCK, M.D.

Cocaine is not Coca.—Vin Mariani was used by the profession fully twenty years before cocaine was known in medicine. In fact, through this preparation physicians were made familiar with the properties of Coca, and this was the original and only available form of employing the remedy. The popularity of Vin Mariani has led imitators to foister upon the profession artificial substitutes concocted by adding cocaine to wine. Such base frauds masquerading as Coca Wine—a title originated by M. Mariani—have done great evil and tend to unjustly cause condemnation of all Coca preparations as but false products.

Evils resulting from substitution and imitation of Vin Mariani, and the abuse occasioned by these false concoctions, have led to the introduction of State laws restricting the sale of cocaine and of cocaine preparations. Mariani & Co. are heartily in accord with such humane legislation, and as manufacturers of the standard and original Coca Wine, urge official analysis of their preparation as testimony of the confidence reposed in them by the Medical Profession who have long recognized the worth of Vin Mariani, and who continue to prescribe it. It is but just to emphasize these truths and explain the difference between a true Coca Wine and base and dangerous impositions fortified by adding free cocaine.

Daniel's Conct. Tinct. Passiflora Incarnata is sedative, hypnotic and anti-spasmodic. For a number of years the medical profession has been looking for a true nerve calmative, and as one physician expresses it: "Passiflora more than fulfills this want." For women who suffer from soreness in the lumbar region, or acute abdominal pains, it may be given with absolute assurance, because its tonic action is exerted on the whole uterine system, and therefore relieves dysmenorrhea, menorrhagia, and leucorrhea. It is the best remedy for calming the nerves of women during child-birth and the menopause. In cases of hysteria, Passiflora is a much needed hypnotic and sedative, producing the rest that is so necessary in regaining poise and strength.

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ORIGINAL COMMUNICATIONS.

**A STUDY OF NINETY-ONE CASES FOR THE RELIEF
OF VARIOUS FORMS OF HERNIA WITH THEIR
COMPLICATIONS.***

BY ORVILLE HORWITZ, B.S., M.D., PHILADELPHIA, PA.

The operations performed by us for the relief of various forms of hernia as here set forth represent the work achieved during the past twelve years in private practice, at the Philadelphia Hospital and at the Jefferson Medical College Hospital. Unfortunately the majority of patients were inmates of either one or the other of these establishments, and consequently many were lost sight of after they had quitted those institutions, so that the number of cases which permanently recovered after a radical cure had been attempted cannot be definitely ascertained. The opportunity has been afforded us in twenty-nine cases to watch the permanency of the results obtained by operation, and from this number we are in a position to give some definite information regarding the subject.

As none of the cases under consideration was adapted to the employment of any of the palliative measures in vogue which are applicable to so many forms of hernia, this important division of the subject will not be considered in the study of the cases herein recounted.

The various operations performed are classified as follows: thirty-two cases indirect inguinal hernia (strangulated); twenty-

*Read before the Philadelphia County Medical Society, Jan. 27, 1904.

seven cases indirect inguinal hernia (radical operation); eight cases indirect inguinal hernia (palliative); five cases direct inguinal hernia (strangulated); one case direct inguinal hernia (radical operation); three cases direct inguinal hernia (palliative); three cases femoral hernia (strangulated); two cases femoral hernia (radical operation); three cases umbilical hernia (strangulated); three cases umbilical hernia (radical cure); four cases ventral hernia (incisional), radical operation.

The complications were: one case of bilateral hydrocele with inguinal hernia; radical cure. Two cases of unilateral hydrocele, inguinal hernia; radical cure of both. One case of tuberculosis of testicle, inguinal hernia; castration with radical operation for hernia. Four cases of inguinal hernia with undescended testicle; castration and radical operation for hernia. Three cases of inguinal hernia with undescended testicle; transplantation of testicle and radical operation for hernia. One case of inguinal hernia with encysted hydrocele of cord; radical operation for both conditions. One case of long-standing strangulated femoral hernia, gangrene of bowel with rupture, necessitating abdominal section (Richter's hernia.) One case of hernia reduced *en masse*, necessitating abdominal section. One case of appendiceal abscess rupturing into an inguinal hernia sac. One case of long-standing hematoma of the tunica vaginalis testis with large incarcerated omental hernia simulating malignant disease of the testicle. In two cases of strangulated inguinal hernia an ovary was found in the sac in one, and a portion of the bladder in the other. Gangrene of the constricted bowel in seven cases necessitated the establishment of an artificial anus; bowel opened without disturbing constriction and left *in situ* in one; resection of bowel in three cases and the removal of a doubtful spot about the size of a thumb-nail, with closure of the opening in one.

Death ensued in sixteen cases as follows: one femoral, two umbilical, one direct inguinal, twelve indirect inguinal. In twelve of the cases death was due to peritonitis; strangulation had existed for many hours before resorting to operations, taxis having been persisted in for a lengthened period without avail. Of the four remaining cases, one died from exhaustion, one died from intestinal perforation of a damaged bowel following operation, probably caused by intestinal distention succeeding

paralysis of the bowel. Death occurred on the fourth day after the operation. In one, in which the individual suffered from chronic Bright's disease, uremia was developed. In this case local anesthesia had been employed. The remaining case was one in which a radical operation had been attempted for the relief of a large reducible hernia. Examination of the urine before operation showed the kidneys to be healthy; suppression of urine intervened, and the patient succumbed.

Operations for the relief of hernia may be divided into three classes: (1) Herniotomy, an operation which is performed when strangulation exists; it is always an emergency operation, the mortality depending not only on the age, character of the hernia and condition of the patient, but is greatly influenced by the length of time that the protrusion has continued, as well as the amount of force put forth, and the duration and frequency with which attempts at taxis have been made.

(2) The so-called "radical operation," in which the hernial protrusion is not strangulated and an effort is made to effect a permanent cure.

(3) A palliative operation, by which is meant surgical intervention in cases in which, owing to the large size of the hernia, atrophy of the muscular structures of the abdominal wall ensues; the large size of the hernial outlet and the changed condition of the inguinal canal exist, and a permanent cure following a radical operation is not to be hoped for. Nevertheless, in properly selected cases, individuals suffering from this condition are materially benefited by surgical interference. The general health improves; the obstinate constipation so frequently associated with this state is relieved. The annoying sensation of abdominal tension and pain disappears, the patient being able to keep the contents of the hernial protrusion within the abdominal cavity by means of an apparatus, an impossibility before surgical interference.

Forty-two operations were performed for the relief of different forms of strangulated hernia; of which number three were femoral, three umbilical, five direct and thirty-two indirect inguinal.

It is significant to note that in every instance in which death resulted from herniotomy the operation had not been performed for several hours after the constriction occurred, and in almost every instance violent and prolonged taxis had been made at

short intervals for a lengthened period of time. In one case, that of an old man, seventy-three years of age, the strangulation was unrelieved from four o'clock in the morning until eight in the evening, during which time the patient was kept constantly under the influence of ether, taxis being frequently resorted to. On opening the sac the tissues were found to be blood-stained and the serous coat of the bowel stripped off in patches. The intestines presented a most doubtful appearance. Reports of many similar instances are to be found in the literature on the subject.

We believe that gentle taxis should be attempted for the period of about ten minutes after the strangulation occurs. Should this fail, preparations should at once be made with a view to an operation. As soon as the patient is under the influence of an anesthetic, another gentle effort should be made to relieve the constricted bowel; if this does not succeed an immediate operation should be resorted to. It is generally conceded that taxis of a strangulated femoral hernia is fraught with more danger than that of the inguinal variety (Crowley). Cases are recorded of rupture of the bowel occurring in violent efforts at reduction in femoral hernia; statistics prove that there is more danger of a reduction taking place *en bloc*, when the protrusion occurs at the femoral than at the inguinal outlet. Taxis, therefore, can be persisted in for a longer period and with less danger when the rupture is of the latter than of the former variety. It is true that in a small percentage of cases delay, the local employment of ice, etherization and taxis will sometimes result in relieving the strangulation. The number of cases in which this method of treatment succeeds is so small in comparison with the numbers that fail that it is wise to err on the safe side and operate early, thereby preventing the individual being brought to the operating table with a damaged intestine, and reducing the chance of recovery. We feel assured that no modern surgeon would be content, after a fair effort at taxis had failed, to allow several hours to elapse without affording operative relief to the patient, and would object to trusting to time and renewed resort to taxis to reduce the hernia. Symptoms of intestinal obstruction persisting after reduction of a strangulated inguinal hernia call for immediate abdominal section, as the probability is that the

hernia has been reduced *en masse*. One symptom that we have observed to be frequently present, characteristic of acute intestinal obstruction, is the peculiar character of the uncontrollable vomiting—the individual turns on his side and ejects a large quantity of watery, mucoid material, sometimes tinged with greenish bile. This is repeated at short intervals until the bystanders frequently wonder whence all the fluid matter is derived.

Of the cases of inguinal hernia operated upon, with the exception of three (these being among the earliest herein recounted), the incision employed was similar to that made for the radical cure in non-strangulated cases. The advantage of this mode of exposing the sac over the old method of raising a fold of skin at right angles to the external abdominal ring, and transfixing it, is too obvious to need any comment. In two cases in which the bowel was gangrenous, the general condition of the patients being desperate, the constriction was not molested; the gangrenous portion of the bowel was freely incised and left *in situ*. One individual recovered, and the other died, apparently from exhaustion, the patient being well-nigh *in articulo mortis* at the time of operation. In third case the gangrenous portion of the intestine was resected and the divided ends of the gut stitched to the edges of the wound. This person recovered with the formation of a fecal fistula. In three cases resection of the gangrenous portion of the intestine was performed, one being a strangulated femoral hernia, the so-called "Richter's" variety already alluded to; the second a strangulated umbilical hernia, and the third an indirect inguinal hernia. The latter recovered; the other two died of peritonitis. In one case it was found that the area of gangrene was limited to a spot about the size of a thumb-nail. This was resected and the wound closed by continuous Lembert suture. The patient made an uninterrupted recovery. The Murphy button was employed in one instance, the patient's condition being such at the time of operation as not to warrant unnecessary delay. In one case, the O'Hara anastomosis forceps was employed and found to be most satisfactory. We, as a rule, do not advocate the employment of any of the various instruments devised to accelerate the operation of intestinal anastomosis. We have been able to resect an anastomosis

quite as quickly without the aid of any of the devices suggested as with them. It is a great advantage to acquire the dexterity of operating rapidly without being hampered by the use of special instruments.

The advantages to be derived from a resection of a gangrenous bowel with anastomosis over that of establishing an artificial anus are too evident to need comment. It is only in those cases in which the patient's condition is such that any unnecessary delay would add to the danger of a fatal result that an artificial anus should be established. Local anæsthesia was employed in cases in which the patient's condition at the time of operation was desperate. It was not found, as is so frequently claimed, that the intestine could be manipulated without pain.

In every instance in which the patient's condition warranted the attempt, an effort was made to effect a radical cure after the constriction had been relieved and the contents of the sac returned. The additional work necessary to produce a permanent cure, as a rule, requires but very little additional time and should always be attempted whenever possible. In cases in which general peritonitis existed accompanied by paralysis of the bowel, the method of treatment suggested by Dr. Andrew J. MacCosh (*Ann. Surgery*, June, 1897) was adopted :

Two ounces of a saturated solution of magnesium sulphate were injected into the small intestine as high up as possible by means of a hollow needle attached to an aspirating syringe, the little wound in the bowel being closed by means of a Lembert suture. We are convinced that in at least three cases life was saved by this means of treatment. When peritonitis was present the abdominal cavity was irrigated with a large quantity of hot normal salt solution, and drained. If there had been no injury to the bowel, ten grains of calomel were administered as soon as the patient had recovered from the effects of the anesthetic. A large dose of the mild chloride of mercury in paralysis of the bowel, with marked distention, is always beneficial ; not only does it have a tendency to induce peristaltic action, but it is an excellent diuretic, having a proneness to prevent suppression of urine which sometimes accompanies abdominal complications. Small doses of the remedy, repeated at short intervals, will not produce the

active vermiculation which is obtained by the administration of a single large dose.

In one case of strangulated hernia, on opening the sac after separating the omentum and intestines, there was found to be, lying posteriorly, what appeared to be a cyst. The nature of the cystocele was not at first recognized, protrusion of a portion of the bladder being suspected; the urine was withdrawn by means of a catheter, when the tumor immediately subsided, thereby verifying the diagnosis. There were no symptoms present before operation which would tend to show that the bladder was in any way connected with the hernia. We have had the opportunity to observe two similar cases; they were inmates of the Philadelphia Hospital, and came under the care of our colleagues. In neither case were there any symptoms present that would lead a surgeon to suspect that the bladder was in any way implicated. In one of the patients the bladder was opened by mistake and in the other the organ was recognized and returned to the abdominal cavity. Hernia of the bladder may occur alone or it may be associated with a protrusion of the intestine and omentum. The diagnosis of the condition is but rarely made before operation. The condition may be suspected if there is an unexplainable frequency of micturition, and the history of the tumor shows that it diminishes in size or disappears after urination. The suspicion that the bladder forms a portion of the hernial contents can be determined by drawing off the urine by means of a catheter. On removing the urine the size of the swelling will diminish; after evacuating the bladder it can then be dilated by means of either air or water and the tumor will immediately reappear.

Hernia of the bladder alone may be mistaken for an ordinary hydrocele or a hydrocele of a hernial sac. Several cases are on record in which a hernial protrusion of the bladder has been tapped under the belief that the cyst was a hydrocele of the vaginal tunic. On opening the sac the bladder may be recognized, if present, by the discovery of what appears to be a cystic tumor, which usually forms part of the wall of the sac. The usual presence of fat over the cyst and outside of the sac, the characteristic unstriped muscular fibers composing the wall of the bladder, and also occasionally the longi-

tudinal veins which are found in the vicinity of the fundus of the organ, which are frequently much engorged and consequently prominent, should aid in making proper diagnosis. Moreover, when the sac has been twisted, preparatory to resection, if the bladder be included, suspicion should be aroused by the unusual thickness of the structure.

When a portion of the bladder is found to form a portion of the contents of the hernial sac, it should be freed from any adhesions that may exist and returned to the abdominal cavity. Should the protrusion of the viscus assume the form of a diverticulum, it is generally considered wisest to resect the pouch and close the opening made in the bladder by two rows of sutures.

In a private case operated upon at St. Joseph's Hospital for what was presumed to be an incarcerated inguinal omental hernia, the sac was found to contain the ovary and Fallopian tube with a piece of indurated omentum. The latter was resected and the ovary and tube freed from adhesions and restored to the abdominal cavity. The tumor had existed for three years, during which time it had been gradually increasing in size with increased induration. The patient stated that it was the seat of much pain during menstruation. The cause of this was inexplicable before operation.

Little is known as to the etiology of hernia of the ovary. The diagnosis is but seldom ascertained before the operation. The condition may be either acquired or congenital, the latter form being the most common. The sac may contain only the ovary or the Fallopian tube; both structures, however, may be present, associated with other viscera. The rupture usually occurs on the left side; cases are on record in which the protrusion has been bilateral. Statistics show that the inguinal variety is by far the most common. The ovary has been found in Scarpa's space and even in the obturator foramen. So far as we have been able to ascertain, there is no case on record in which the ovary has been found associated with a femoral hernia.

A study of hernia and its literature during the past fifteen years shows that the subject of its radical cure has exercised the ingenuity and talents of surgeons to a remarkable degree. Different methods of attempting to effect a radical cure of the inguinal variety have been suggested by as many as twenty-

five operators, viz.: Ferguson, Nélaton, Ombredane, Bernhardt, Deaver, Ball, Stimson, Landphere, Mayhean, Phillips, Czerney, Socin, Thomas, Schawtz, Barker, Martin, MacCuen, Bloodgood, Eccles, Beck, Fowler, Kocher, Halstead, Bassini, and Benjamin. These gentlemen each recommend a different method of operating in hopes of achieving success.

Many of these operations still have their advocates; some are forgotten; others have fallen into disuse; a few are yet on trial. The fact that so many different methods of operating are still to be tested would seem to prove that the proper method thus far to be selected in the hopes of procuring a fundamental cure, depends on the particular condition that each case presents, as well as the character of the tissue of the individual with whom the operator has to deal. As Eccles very aptly puts it: "A uniformity of procedure in suturing the canal implies that all inguinal hernias are alike and implies similar treatment, — a fact that experience entirely and necessarily discredits, *each case having to be dealt with on its own merits.*" This statement appears to us to be the keynote of the situation and explains why a particular operation will not succeed in each instance, and hence the existence of so many different methods to effect a radical cure that are in vogue.

In spite of the fact that the profession is at variance as to the most suitable operation to be selected for the radical cure of hernia, accumulated evidence derived from a large number of different operations has narrowed the choice of methods adopted by the majority of surgeons in this country down to a few, which may be enumerated in order of their popularity as the Bassini, Halstead, Kocher, Bloodgood, and Fowler, the last named being still on trial. Each has its advocates. As has been already pointed out, none is probably suitable to every variety of inguinal protrusion. Frequently the surgeon must use his ingenuity and experience as a guide to the best method of procedure.

The popularity and confidence evinced by the profession in the United States for the Bassini operation are probably largely due to the writings of Bull and Coley, who published an article in the *Annals of Surgery* for 1898, in which it is demonstrated that attempts to effect a radical cure of inguinal hernia were disappointing until the Bassini method of operating, together

with the employment of the absorbable sutures, was adopted. The results of 1053 operations are tabulated, of which 522 were performed by Bull and 531 by Coley.

From our own experience and from the knowledge gained from the study of the literature of the subject, we have learned to believe that the Bassini is the proper method to pursue for the radical cure of the majority of patients afflicted with inguinal hernia; but cases will arise from time to time in which we must deviate from the directions suggested by Bassini and select some other means of operating in order to effect a cure. When the conjoined tendon is either so attenuated or so obliterated that Hesselbach's triangle has lost its strongest support, transplantation of the rectus muscle is employed after the method suggested by Bloodgood (*Bull. Johns Hopkins Hosp.*, May, 1891); the remainder of the operation is performed by the Bassini method.

Whilst some authorities still advocate aseptic silk and silver wire for the buried sutures when closing the various structures, the mass of clinical evidence is against their employment, the material of choice being kangaroo tendon and chromicized catgut.

Of twenty-nine cases in which a radical cure was attempted, whose after course could be traced, the result may be tabulated as follows; eighteen indirect inguinal; Halstead one; Fowler one, and the remaining after the manner suggested by Bassini. Six indirect inguinal hernias; strangulation existing at the time of operation. In these cases after relieving the constriction, the Bassini or Bloodgood operation was performed. One indirect inguinal hernia; Bloodgood operation. One ventral hernia, following a celiotomy. Two umbilical hernias; one the ordinary method, the other the Mayo operation. One femoral hernia; Bassini method.

Of the eighteen cases of non-strangulated inguinal hernia, all have remained permanently cured for a period varying from one up to ten years, save in one instance, in which a recurrence took place one and a half years after operation. In this instance the protrusion was large and had existed for several years, during which time a truss had been constantly worn. The case was one in which a Bloodgood operation should have been performed. Unfortunately the radical cure was attempted

before this method of operating had been suggested. Of the six cases in which a radical cure was attempted at the time that the strangulation was relieved, one recurred in nine months and another two years after operation, this patient being seventy-three years old when the herniotomy was performed, the hernial protrusion having existed fifteen years. In none of the remaining cases has recurrence taken place. Only six months, however, have elapsed since the operation for relief of femoral hernia was performed. Clinical evidence has shown that if a recurrence is likely to occur, it usually takes place within six months after the operation, and that the chances of recurrence are greatly diminished after one year.

The case of umbilical hernia operated upon after the method suggested by Mayo has been found to be the most satisfactory for the relief of this form that we have ever employed. It is nine months since the operation was performed, and up to this time the individual continues in excellent health; there is no tendency to recurrence.

In the cases in which either a unilateral or bilateral hydrocele existed as a complication, the hydrocele was partially resected in one, and in the two remaining patients the Doyen method was adopted. All made uneventful recoveries. So far, there has been no tendency to a recurrence of either the hernias or hydroceles. In the case of hydrocele of the cord, the tumor was the size of a small orange, which was dissected out in its entirety.

In the case of tuberculosis of the testicle complicated with hernia, it was found necessary to resect the entire vas deferens together with the removal of the testicle. Two years have elapsed since the operation; so far there has been neither a return of the rupture nor any evidence of further tuberculous infection. It is true that the patient has had the advantage of fortifying his constitution by a sojourn for a year and a half in New Mexico.

In seven cases of undescended testicle, associated with inguinal hernia, one was an iliac retention, the testicle being found in the iliac fossa near the internal abdominal ring. In the remaining cases the organ was located either in the inguinal canal or at the external abdominal ring. In four of the cases the hernia had insinuated itself beyond the retained testicle

and had passed into the scrotum. In one case the presence of the testicle prevented the protrusion of the bowel beyond the external ring. In this case both the rupture and the testicle were found in the inguinal canal.

If the individual with an undescended testicle is under thirty years of age and is strong and vigorous, the chances are in his favor of not being sterile. If, however, he is effeminate, has a falsetto voice, small, undeveloped penis and absence of hair on the pubes, the condition being bilateral, the testicles having been the seat of repeated attacks of orchitis, the probabilities are that the patient is incapable of procreation. Provided the testicle was healthy, even if somewhat atrophied, it has been our custom to save it whenever it was possible to do so. On more than one occasion we have been gratified to find that after the transplantation an atrophied testicle has developed into almost its normal size when placed into its normal position. Many cases are on record in which men with undescended testicles have married and succeeded in impregnating their wives. For this reason the individual should always have the benefit of the doubt; the sexual glands should not be sacrificed, if possible; moreover, it is well known that the loss of one or both of the glands is frequently conducive to great mental depression and even melancholia.

Clinical experience has taught that resection of the epididymis and vas deferens in cases of diseased condition of those organs, the testicle retains its normal size, sexual vigor is unimpaired, the mentality of the patient remaining undisturbed. This observation places the testicle among the ductless glands. It would appear that one of the functions of the testicle is to elaborate a secretion, the absorption of which is of vital importance to the preserving of the normal condition of the nervous system. If this theory be true, the organ should never be sacrificed if there be a chance of its being preserved. In one instance, after freeing the adhesions of an undescended testicle, it was found that on placing the organ in the scrotum the tension on the cord was very great. In order to relieve this condition the method suggested by Mr. Wood was adopted. The globus major was dissected free from the testicle, far enough down to permit of the organ being inverted. By this means one and a half inches in length was gained. After a

testicle had been transplanted, not only was it fastened by means of a suture to the bottom of the scrotum, but the cord was stitched to the pillars of the ring.

Eleven cases were treated by what may be denominated the "palliative operation"; they were of long standing with large hernia, enormous hernial outlets, and atrophied muscular abdominal walls. Eight were indirect, and three were direct inguinal hernias. Two had been incarcerated for a long time; three were partially so, and three were reducible; but the individuals were unable to retain the mass by any form of apparatus that was employed. Four were of large size, the remainder being of the dimensions of the average hernia. These individuals were annoyed by flatulence, eructations, constipation, occasional nausea and colicky pains. In each instance the individuals were incapacitated for work, so that they necessarily became involuntary idlers and habitués of the Out Wards of the Philadelphia Hospital. In none of these cases was it presumed that the operation would result in a permanent cure. It was undertaken simply in order to relieve the symptoms and in hopes that after convalescence the individuals would be enabled to retain the intestinal protrusion by means of a properly applied truss. In each instance the result justified what might be regarded as an experimental operation; all were much improved and all were enabled to retain the bowels by means of a suitable apparatus.

In cases of this description the surgeon cannot follow the fixed rules laid down for any recognized operation; he must utilize his experience and judgment with such available resources as he may have at command. In two cases in which the rings were large and the conjoined tendon weak or absent, the Bloodgood method was adopted. For the closure of enormous hernial outlets with large protrusion associated with an atrophied condition of the muscular structure, cases hitherto considered as inoperative, Witzel suggested the closure of these large apertures by means of buried silver netting (*Cent. f. Chir.*, March 10, 1900).

In spite of the apparently favorable results obtained in the few reported cases, we cannot help feeling skeptical as to the value of the procedure and are inclined to believe that a more extended experience with this method of attempting to close

large hernial outlets will prove unsatisfactory. As has already been pointed out, the employment of the buried silver suture, from the use of which so much was expected when first introduced to the notice of the profession, has not come up to the expectations and has in consequence been abandoned by the majority of surgeons. We can see no reason why, therefore, the employment of silver netting, flagee or allied devices should not meet with a similar fate. Nevertheless this method of attempting to relieve what was hitherto supposed to be an inoperative condition is still on trial. It certainly merits the careful study and serious consideration of the profession. The gratifying results obtained in the few cases that have been reported are most encouraging, and it is hoped that a more extended experience with this mode of treating cases of the kind will result in demonstrating that a large number of these unfortunate sufferers who are now condemned to a life of pain and misery may be capable of being relieved.

In each case of the kind operated upon by us a different method was employed. In our judgment, in selected cases of long standing incarcerated hernias and those that are reducible, but cannot be retained by the employment of a truss, the chance of relief should be attempted and comfort afforded by a palliative operation. Not with the hope of making a permanent cure, but to relieve the distressing symptoms which naturally accompany such a condition, an effort should be made to retain the rupture by means of a suitable apparatus. We are convinced that too many surgeons give too little attention to the selection of a suitable truss for non-operative cases. As a rule, the patient is sent to a truss maker, who applies the variety of instrument that in his judgment is best suited for the case. It is true that the average truss sold by instrument makers will usually serve to retain the ordinary hernias. Occasionally the truss does not hold the protrusion in place, when the patient is told that is impossible to retain the rupture by means of an apparatus. A careful study of the cause which prevents the truss from being satisfactory, together with the anatomical peculiarities which exist in each instance, will result, in the earlier stages of reducible hernias, in keeping them satisfactorily in place by the use of a suitable device.

It is generally conceded that age makes but little difference in the mortality when operating on strangulated hernias,

provided the constriction is relieved without using taxis inordinately before resorting to operation. The extremes of life seem to bear the operation well.

Regarding the age when a radical operation can be performed for the relief of hernia with the greatest certainty of a favorable result, the views advanced by Coley have been generally accepted in this country, the most favorable period being about the sixth year. In the adult, without good cause, it is not well to attempt a radical cure after sixty, and not then in very large and incarcerated hernias.

Coley teaches that if, after an operation, a recurrence is liable to take place, it usually does so within six months, and that if the patient remains in a healthful condition for one year it is usually safe to predict that recurrence will not take place. In three cases we have had a recurrence after two years. We believe in the main that Coley's views are correct.

There is a certain class of patients subject to hernia who are unfit for a radical or palliative operation unless the protrusion becomes strangulated, when the danger is greatly increased; but, of course, the individual must be allowed to take his chances. Unsuitable cases for either a radical or a palliative operation are the obese, in whom the abdominal wall bulges far forward; persons who suffer from any disease of the viscera, and those who have an incarcerated hernia of enormous size and long standing. Those who necessarily wear a truss after an operation are individuals who suffer from a direct inguinal hernia; those in whom an infection of the wound has taken place after an operation; all operations which might be classed under the head of palliative; in hernias of long standing; in individuals who have to earn their livelihood by hard labor; in emergency herniotomy where the patient's condition would not warrant the employment of the length of time required to do a radical operation, and in children in whom it was found that the hernial ring was unusually large. According to Eccles, those who have a poorly developed muscular abdominal wall and a family history of tendency to hernia should always wear a properly fitting truss after undergoing an operation.

From a study of the cases recited in this paper, the following conclusions seem to be warranted:

- (1) The safety of the patient as well as the lowering of the mortality in strangulated hernia depends on gentle taxis being

exerted for a short period, which if unsuccessful should be succeeded by an immediate operation.

(2) Herniotomy for the relief of strangulated hernia in the aged is not a dangerous operation, provided it is performed as soon after the constriction has taken place as possible.

(3) An inflamed hernia should not be treated by taxis, but should be subjected to an operation.

(4) No one method of attempted radical cure is applicable to every variety of rupture. The Bassini is suitable to the largest majority. The Bloodgood for those in whom a large abdominal ring and weak or atrophied conjoined tendon exist. The relief of special forms and conditions of hernia must be met by the ingenuity of the surgeon, selecting the operation to the indications presented.

(5) The palliative operation is applicable to a large number of selected cases of reducible hernia, when the protrusion cannot be kept within the abdominal cavity by means of a truss, and also in some forms of incarcerated hernia.

(6) A radical cure may be safely attempted on patients who have reached their sixth year and on those who have arrived at their sixtieth year.

(7) Individuals who submit to what is known as the "palliative operation" should continue to wear trusses after recovery.

(8) In cases not applicable to a routine method of operation the surgeon should strive to do what in his judgment would be the best means of affecting the removal of the entire neck of the sac on a level with the parietal peritoneum. He should, if possible, firmly close the opening in the peritoneum after the removal of the sac; he should obliterate the depression of the peritoneum in the vicinity of the internal abdominal ring, bring in apposition the structures, and close the apertures which form the canal through which the rupture protrudes.

(9) An aseptic result following a radical operation with primary union, is essential to obtain a permanent cure of hernia.

(10) In cases of undescended testicle associated with hernia every effort should be made to save and transplant the organ.

(11) The method of operating for umbilical hernia suggested by Mayo is probably the most satisfactory for that variety hitherto suggested.

(12) Absorbable sutures are preferable to those of non-absorbable material.

BRIEF OBSERVATIONS ON SOME CONDITIONS IN WOMEN THAT ARE OF MUCH CONCERN TO THE PRACTITIONER.

BY J. RIDGLY SIMMS, A.M., M.D., RACINE, WISCONSIN.

The conditions of which I wish to speak are dysmenorrhea, and the state following miscarriage or abortion, in which there are retained portions of the placenta and membranes that require removal or expulsion.

For lack of space, I shall devote myself, in the present paper, chiefly to dysmenorrhea, and will dismiss the condition following abortion with a few remarks, which may as well precede the other part of my article. I reserve for a future communication the detailed discussion of this important and interesting clinical condition.

The effects of retained placental or fetal tissue in a partially successful miscarriage or abortion consist in hemorrhages, purulent discharge, enlargement of the uterus, subinvolution, metritis, endometritis and sepsis. The indications in these cases are, therefore, the thorough emptying of the uterus and the rendering of the womb-cavity aseptic.

In ordinary cases this must be done by surgical interference, including curetting and the removal of all decomposing and diseased tissue, followed by the application of antiseptics to the endometrium. There is a class of cases, however, in which for one reason or another curettage is refused by the patient, and in which it is incumbent upon the physician to give what relief he can by medical means. In such cases I have prescribed Ergoapiol (Smith), a combination of the active principles of ergot (ergotine), parsley (apiol) and certain other emmenagogues and uterine tonics. In one case of this kind, which came under my observation some months ago, I used Ergoapiol (Smith) with such marked success, that I learned since then to rely upon this preparation in removing the retained fragments from the uterus, emptying the organ and reducing it to its normal size and functions. The remedy in question has proved so trustworthy in my hands in these cases, that when it disappoints, which it rarely does, I look about to ascertain wherein I myself have erred.

A discussion of the causes of dysmenorrhea would lead us too far in the present brief clinical paper, and it will suffice if I

assume that the reader is acquainted sufficiently with this part of the subject to follow me in the remainder of the article. The clinical diagnosis of dysmenorrhea is in itself easy enough, while the diagnosis of the cause is not always so simple. In the cases presented here I paid especial attention to the causation of the menstrual pain, as I believe that in this manner I was better able to outline the indications for treatment. It goes without saying that dysmenorrhea from mechanical obstruction is not amenable to medical treatment. Fortunately, however, it has been in my experience at least not frequent, as dysmenorrhea depending upon congestion. The specially disagreeable and intractable form of dysmenorrhea which is accompanied by a fetid discharge as a result of the decomposition of the retained menstrual blood, also comes under discussion here, as the use of douches with antiseptics and deodorants cannot be hoped to affect it permanently, while the employment of more radical medicinal means does bring about the desired effect in this condition.

In congestive dysmenorrhea, and in that form which is accompanied by fetid discharge, the indications are to diminish congestion, by promoting the contractions of the uterus and relieving it of the accumulated blood, to stimulate glandular activity in the mucosa, to restore the tone of the uterus and the nutrition of its tissues to normal, and to relieve spasm and pain.

The following cases illustrate the effects which I obtained with the use of Ergoapiol (Smith) in the treatment of dysmenorrhea :

Some months ago I was consulted by a young woman who had suffered from scanty, fetid menstruation, accompanied by a great deal of pain, since the birth of her first child seven years previously. Her labor had been followed by a tear of the perineum which had been left unrepaired, and also a laceration of the cervix uteri. This patient consulted a specialist, but his treatment did not give her relief. Examination revealed the presence of the uterine and perineal lacerations already mentioned, and disclosed a chronic endometritis that had given rise to a fetid discharge and to pain during each menstrual period. I repaired the tears, curetted the uterus, and hoped in this manner to obtain permanent relief of the

patient's symptoms. After she had recovered from the operations, she declared that she was feeling better than she had been for years. But very soon the fetid discharge and the pain returned at each menstrual period, and evidently something else had to be done if I wanted to save my reputation. I then tried local applications, alteratives, uterine tonics, etc., all without avail, until finally Ergoapiol (Smith) was given. The result was immediate relief and a gradual and permanent improvement in the menstrual flow until it was free from pain and devoid of any disagreeable odor.

This patient was evidently suffering from congestive dysmenorrhea, which was intensified by the presence of lacerations of the cervix and the perineum which had existed since parturition. The result attained illustrates very well how Ergoapiol (Smith) acted upon the uterus, restoring its tissues to normal condition and re-establishing the menstrual function upon its normal basis.

Another type of dysmenorrhea, that which I term "nervous," but which the authorities term "neuralgic," is illustrated by the the following case which recently came under my care:

The patient was a young woman who had been married two years, but had not borne any children. She stated that she had pain during the menstrual period from the first onset of menses, and at the time of examination she also complained of a fetid discharge. The menstrual flow was scanty and rarely of blood red color. Just before and after the period she had backache and headache, her complexion was unhealthy, not bright and clear as that of her sister, and she appeared older than she really was. She always dreaded the onset of the menses which recurred with a regularity that is not always present in these cases. She was easily excited, and received impressions vividly and indelibly. Her digestion was poor, and she was often sleepless, irritable, and peevish.

Vaginal examination revealed a slightly thickened os and slight endocervicitis, with erosions of the cervix. Cod liver oil, malt extract, hypophosphites, and aromatics, in combination, 25 per cent. of each, were given freely during the intervals between the menstrual periods, and for three days before the expected menstruation Ergoapiol (Smith) was given in capsules, one being given three times daily until the dis-

charge ceased. At the fourth period after the beginning of the treatment she was relieved of all her symptoms, and was free from pain and fetor during menstruation. Locally, tincture of iodine and occasionally tampons of ichthyol and glycerine were applied. The cure was permanent and in every way satisfactory.

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THE OPERATIVE TREATMENT OF MALIGNANT DISEASE OF THE MAMMARY GLAND, RECTUM, PENIS AND LIP.*

BY WILLIAM L. RODMAN, M.D., PHILADELPHIA, PA.

I was led to choose this subject for your consideration to-night after talking with a surgical friend, both of us having heard recently the papers in the symposium upon the value of the X-rays in inoperable cases of carcinoma. It occurred to me that it would not be an inopportune time to say something of operable cases, and of what we may expect at the present time, if a timely and rightly done operation be performed. It is not necessary for me to emphasize the ever-increasing frequency of malignant disease, inasmuch as that has been done by Williams, Snow, Cheyne and many others of the English school, and by Park, Warren, Lewis, Milus and others in our own country.

The reports of the Registrar General of Great Britain indicate that malignant disease is at the present time five times as frequent as it was in 1840. At that time there was one case of malignant disease to every 5,646 patients living; at the present time there is one case to every 1,306. In our own country and in Continental Europe this same increase in the frequency of malignant disease has been manifested. Roswell Park, in his Report as Director of the Pathological Laboratory to the New York State Legislature, made the statement several years ago that within ten years of that time that carcinoma would claim more victims in New York than consumption, smallpox and typhoid fever combined. When we remember that each of these three diseases is decreasing in frequency, and

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that to a large extent all are preventable, we can understand how such a prophecy as this may be fulfilled. Certainly the conservatism of Park and the care with which he made this prophecy, basing his estimate on figures in New York State for the preceding eleven years, would indicate, at least, the increasing frequency of malignant disease.

Williams estimates that there are more than 10,000 people in England and Wales alone with mammary carcinoma. Before taking up mammary carcinoma I wish to say a word about the anatomy of the mammary gland. We should remember what Mr. Stiles of Edinburgh says, that there is no capsule to the mammary gland and that, therefore, it is a very common thing to have outlying glandular elements. These may be in the axilla or they may be in the most unexpected situations. One should always have the possibility of outlying glandular rudiments in view and should make wide incisions. The second and more important anatomical point is the fact that the lymphatics of the mammary gland are more important than was formerly taught by Sappey and other anatomists. Instead of the single chain of lymphatics beginning at the areola and following along the skin to empty finally into the axillary nodes, we find there are several other chains which are just as important. There is a second chain of superficial lymphatics which drains the skin of the axillary portion of the gland. These vessels pass internally, perforate the second and fourth intercostal spaces and empty into the mediastinal glands. In addition, there are three deep sets: one which begins in the milk ducts and acini, which drains the axillary portion of the gland and, passing superficially, unites with the first set and with it forms a network passing around the axillary vessels up to the clavicle where they discharge. A second set drains the sternal half of the gland and passes with the second superficial set through the second and fourth intercostal spaces along with the internal mammary artery and empties into the anterior mediastinal glands. A third set drains the retromammary tissues and perforates the intercostal spaces to pass along with the intercostal arteries to the vertebral column. In that way we can understand the not infrequent metastasis of malignant disease to the vertebral column, resulting in paraplegia.

I think that, undoubtedly, the statistics of Americans and Germans, concerning the results of the operative treatment of malignant disease of the breast, are rather too optimistic, so far as the immediate mortality is concerned. It is easy to collect many individual series of from fifty to 125 cases without a single death. These results cannot be accepted as average ones. I think the one per cent. put down by some American authors is too small. I think the 12 and 15 per cent. of the English and of many of the Germans is too large; but I would say that from 3 to 5 per cent. should represent the outside mortality in a very complete operation on the mammary gland at the present time. It would not appear that the more extensive operations, such as Halsted's, in which both muscles are removed and the axilla thoroughly cleaned out, are any more serious than the minor operations. Halsted had a series of seventy-six cases without a single death. Many others have had a large series without a death. In my own experience I have not been so fortunate. In rather more than 100 operations upon the breast I have had two deaths; one, in an elderly woman, seventy-six years of age, a patient of Dr. William E. Hughes. She died suddenly ten or eleven days after the operation from heart failure. She had a marked murmur which we recognized at the time of the operation. I, however, attribute her death to the operation, and count it an operative death. The other case was a patient, forty-three years of age, who had a very large breast and an enormous growth in the axilla which required a most extensive operation. She was under the anesthetic for three hours, and died as the result of the ether on the third day. There was complete suppression of urine after twenty-four hours, and only four ounces were secreted on the first day. I think that at the present time as we get cases, many of them late, with extensive glandular involvement, that we cannot hope to produce a radical cure in more than $33\frac{1}{3}$ per cent. I think it is conservative at the present time to state that at least one-third of such cases ought to be cured, even though they be cases of the second and third degree, in which there will be not only axillary involvement, but also a more or less fixed mammary gland. We find, however, more optimistic reports, some surgeons claiming 50 per cent., and one as high as 85 per cent. Of my

six cases of cure after operation, one has gone six years; one has gone five years; two have gone four years; two have gone just barely over three years. One patient who was operated on in November, 1900, is here to-night.

The first cure that I had was really the most gratifying one of the series. In the Fall of 1897 I operated on a patient for Dr. H. B. Critzman of Welch Run, Pa., who had been operated upon twice before. There was extensive recurrence in the sternal half of the gland and marked axillary involvement. I made one of the most complete operations that I have ever done. I saw the physician about a year ago and asked him how long that woman lived after the operation. He said: "I saw her yesterday. She is in perfect health and uses her arm as well as ever in her life, and asked to be remembered to you." Five years after the operation she was perfectly well in every respect.

One case that I would like to speak of is that of a young colored woman, reported to the Philadelphia Academy of Surgery three years ago. She was operated on for recurrent malignant disease. There was recurrence for which a second operation was performed, and at this operation a large number of glands were removed from the neck, there being a mass in the subclavian triangle as large as a lemon. There was a further recurrence, and for this a third operation, which was the most extensive I have ever done. The woman was only twenty-three when the carcinoma began; in my experience that is a bad prognostic sign. The younger the case, the more rapidly fatal it is. The woman is in fairly good condition to-day, considering the recent and rather extensive operation; it being necessary to resect parts of two of the ribs and a portion of the sternum so that the pleura was exposed. She recovered from the operation very nicely, and so far as I can judge there are no metastases elsewhere. That, of course, cannot be counted as a cure, and I only report it to express my surprise that she is alive.

I wrote to Professor Halsted asking what had been his results with recurrent cases and I have his letter from which I will read an extract:

"We have only once or twice succeeded in saving a case of recurrence of carcinoma of the breast. The case which you

peak of is certainly a remarkable one and I imagine very few have made this experience. I shall be much interested to know if the axillary glands were involved at any time in this case. One of the cases of recurrence saved by us had supraclavicular glands involved as well as axillary. At the second operation a portion of the subclavian vein, as well as the supraclavicular glands, were removed. Another case was an adenocarcinoma, without glandular involvement. She had had several recurrences before consulting us, and was cured by the operation at the Johns Hopkins Hospital. Last spring I operated upon a case of colloid carcinoma, the second recurrence, I think, but in this case at the time of my operation there was no glandular involvement; the first operation was performed five or six years ago, I think. I shall be interested to know if you have cured any cases with supraclavicular involvement."

There was, as I have said, extensive axillary involvement.

Malignant disease of the penis is nearly always carcinoma. A dozen or more well-authenticated cases of sarcoma have been reported, but practically the number is so insignificant that they need not be reviewed. These growths are usually of the squamous epithelial type, but scirrhus may occur. The anterior part of the penis is the part usually involved. As a rule, the incision is made three-quarters of an inch posterior to the lesion. I have here to-night a patient who was shown to this society immediately after the operation three years ago. He weighs eight pounds more than he did at the time of the operation. He is absolutely free from recurrence, never had the slightest difficulty with micturition and has intercourse as well as formerly. The glands were removed from both groins and the wounds united by first intention. The scar of one side is very faintly visible to-day. I would be glad to have the patient examined, because the natural skin covering of the penis is as good as one could wish to see.

In a second case there was a very extensive epithelioma of the penis. The organ was removed close to the body and the glands were removed from both groins. On the right side particularly there was such extensive glandular involvement that in my manipulation of the femoral glands I ruptured the saphenous vein and had to resect it. Butlin reports twenty-

three cures in sixty-five operations, or rather more than 35 per cent. We should do better by present methods.

In all I have records of five undoubted cures of carcinoma of the penis. In 1892 I operated upon a man sent by Dr. Thos. L. McDermott, of Louisville, Ky., and he was alive and in perfect condition at the last report from Dr. McDermott one year ago. In 1896 I operated upon a man about seventy years of age, sent also by Dr. McDermott. The last time I was in Kentucky, less than a year ago, I found that he was entirely well and free from recurrence. A third case operated upon at my clinic in the Kentucky School of Medicine was sent to me from Lebanon, Ky., in 1896.

The immediate mortality from operations upon the penis should not be more than 1 or 2 per cent. Butlin, from a large number of cases, makes a mortality of 4 per cent. when the knife is used, and 14 per cent. when the galvanocautery is employed. I cannot understand why there should be this mortality, unless many of these cases became septic, since it oftentimes is almost impossible to keep from infecting the wounds made in the groins. Even though infection takes place, I cannot understand why the mortality should be as great as 4 per cent. I have had no deaths myself.

In all cases of amputation of the penis I insist that the operation is not completely done unless the groins be opened, whether they seem to be involved or not. I recall a sad case in which failure to operate upon the opposite groin caused me to lose my patient, who otherwise might have been saved. In 1890 I saw a patient with Dr. Peyton, of Jeffersonville, Ind., and while we did an extensive operation on the penis and opened the groin, which was visibly affected, we failed to open the opposite groin, because it did not seem to be involved. The man lived about two years and died from recurrence in the groin not operated.

I have not had a great number of operations upon the rectum. I have one case in the anteroom operated upon about one year ago. The man has gained eighty pounds since operation. He was cachectic at the time and had a most extensive carcinoma of the rectum. I removed the lower four inches by the perineal route and did a preliminary colostomy. He is absolutely free from recurrence, but, of course, a year is too

short a time to reckon the case a cure. Another case operated upon two years ago assures me of no return, and I feel that the patient has nearly passed the danger limit. Mr. Cripps insists that if recurrence does not take place within three years it will not at all. I believe the primary mortality for excising the rectum should not be more than 3 to 5 per cent by the perineal route. It will be at least 10 per cent with the Kraske method or its various modifications. McCosh reports 439 cases with a mortality of 19.1 per cent. That method enables the operator to get out the glands in the sacrum more easily. I prefer when practicable to perform the operation by the perineal route. As to ultimate results, Butlin reports 100 cases with twenty-one recoveries; all had passed the three-year limit. That is as good as we can expect. With the more complete operations now done we will probably get a larger per cent of cures.

Carcinoma of the lip gives the most hopeful prognosis of malignant disease anywhere. Butlin reports a very large number of cases and he estimates that the primary mortality is much greater, I am sure, than any one would think, between 7 and 8 per cent; 1010 cases with seventy deaths. This is on account of the fact that so many operations are extensive and embrace not only the enlarged glands below the jaw, but also the bone, which is excised very freely. So far as the ultimate results are concerned Butlin estimates 53 per cent of cures. I am sure that this does not overstate it. I have an impression that surgeons at the present time are curing more than half of their cases of epithelioma of the lip. Whether the submaxillary triangles seem to be infected or not, they should be opened and any suspicious parts removed. It is just as difficult to detect enlarged glands here as in the axilla before an incision is made. If this is done in every case, I have no reason to doubt that we will cure not only 53, but practically 75 or 80 per cent. of such cases.

THE VALUE OF HISTOLOGICAL EXAMINATIONS IN CARCINOMA OF THE UTERUS.*

BY BROOKE M. ANSPACH, M.D., PHILADELPHIA, PA.

While X-ray therapy seems to have increased the armamentarium of the physician against carcinoma, the chief remedial agent today is found in surgical intervention. Many operations have been devised for the complete extirpation of carcinoma of the uterus. The fact remains, however, that a large proportion of the cases which reach the surgeon are incurable. This statement applies more to carcinoma of the cervix than to carcinoma of the fundus. It need not be proved that the earlier a case of carcinoma of the uterus falls into the surgeon's hands, the more favorable it is for cure. No matter how extensive the radical operation may be, if the carcinoma is of any age, its recurrence is more or less a matter of time. A large number of those who formerly practiced the extensive radical operation for carcinoma have finally become convinced that if the disease has once advanced beyond the limits of the cervix the case, so far as a permanent cure is concerned, is hopeless.

The reason for this is that in the extension of a carcinoma we are dealing with an extension that involves histological elements. When once these elements pass the confines of the cervix they invade the pelvic tissues in such a manner that their detection and complete removal is practically impossible. Thus the carcinoma cells may not only be deposited in any of the lymph glands of the pelvis, but they may indeed grow along the lymph radicles themselves, as described by Mackenrodt, H. W. Freund and Russel. Ernst has shown that the malignant cells also invade the nerve sheaths.

If, therefore, all the glands of the pelvis could be extirpated in the radical operation for carcinoma of the cervix, there would still remain the lymph radicles. Olshausen, Hofmeier, Van Ott, Richelot, Carstens and Jordan believe that no operation for carcinoma that has extended beyond the cervix can be complete enough. Some operators (Kroenig¹) believe that if the grossly diseased parts (enlarged pelvic glands and parametrium) are extirpated with the uterus the carcinoma cells remaining behind in the lymph radicles, etc., may be destroyed.

*Read before the Philadelphia County Medical Society, Dec. 23, 1903.

If, however, one would confine his attempts to the removal of the enlarged glands alone, he should remember that some of the enlarged glands in uterine carcinoma are not carcinomatous, and, on the other hand, some of the diseased glands are normal in size.

Zweifel² and Schauta³ are inclined to look upon carcinoma of the uterus as analogous to carcinoma of an abdominal organ, and to regard extirpation of the pelvic glands as offering little hope for cure.

It is many times impossible to say from clinical means whether there has been any extension of the carcinoma into the parametrium. Kundrat, whose work will be described more fully later, found that even in the absence of induration there might be invasion of carcinoma in the parametrium, and, *vice versa*, that induration itself, if present, might be due to inflammatory reaction of the paracervical tissues.

It is probably the concensus of opinion that unless carcinoma of the cervix is strictly confined to the limits of the cervix, the prospect of cure, even after the most radical procedure, is very small. Although the advanced radical operation for carcinoma is still too young to speak definitely of its success or failure, it is only reasonable to suppose that its application does result in less recurrences than did vaginal hysterectomy; this is true because by a wider resection of the pelvic tissues there is more chance of extirpating all of the carcinoma cells. It is needless to say, that if in any given case one could determine absolutely that the disease was confined to the cervix, vaginal hysterectomy or even amputation of the cervix would do quite as well as the most radical operation. The keynote to the possibility of curing carcinoma by surgical means lies in its early recognition. One has only to observe how often the disease comes to the surgeon after it is inoperable. Statistics concerning the percentage of operable cases are misleading, because different surgeons recognize different bounds of operability, and this is especially true since the development of the modern operations.

Kundrat⁴ an assistant of Wertheim, who advocates the extensive radical operation, has examined the parametrium in eighty cases of carcinoma of the cervix which were operated upon at Wertheim's clinic. His results afford a reliable opinion as to the operability of these cases, assuming that they are

inoperable when once the growth has extended beyond the cervix. In but thirty-two of these eighty cases were the parametrial and glandular structures of the pelvis found free from carcinoma.

In reaching this conclusion Kundrat examined the parametrium and glands of each case in serial sections, examining for this purpose 21,000 preparations.

The percentage of operability, therefore, in Wertheim's cases of carcinoma of the cervix is forty—assuming that after the disease has advanced beyond the cervix the case is hopeless. These figures of Kundrat may be accepted as being nearly correct. He says in his paper that every case at Wertheim's clinic is operated upon whether the disease is far advanced or not. But there must be some advanced cases in which the radical operation would be unjustifiable, so that we may regard Kundrat's percentage of operability as somewhat high. It would seem true, however, that the actual operability of cases of carcinoma of the cervix does not exceed forty per cent.

If results in the surgical treatment of carcinoma of the uterus are to be improved the number of operable cases must be increased, for it is in these alone that there is any reasonable hope of cure. An early recognition of carcinoma is, therefore, of prime importance. There must be an early stage in every case of carcinoma in which it might be recognized by using the means at our command.

Israel,⁵ who recently discussed the etiology of carcinoma, concluded that its origin was directly related to the biological properties of epithelium. After the embryological development of the epithelial or endothelial covering, the cells remain inactive except when their multiplication is necessary to cover some area that has become bared. More proliferation than is necessary to make up for the defect is common.

So long as the epithelial proliferation and the connective tissue remain proportionate the growth is benign hyperplasia (condyloma acuminatum); but if the proliferation of the epithelium is greater than the resistance offered to it by the connective tissue, the epithelial cells penetrate the lymph spaces of the latter and we have the beginning of carcinoma.

The incentive to such a proliferation of the epithelium is analogous to the procreative activity that is observed in the

lower forms of life when they are exposed to difficult conditions of growth. For example, a destruction of some of the epithelial cells upon a surface results in an increased activity of those remaining in an endeavor to replace the defect. Through repeated trauma, which results each time in proliferation of the epithelium, a condition is finally reached, in which, from the more or less continual irritation, the cells take on an abnormal activity of growth. In this light carcinomata cannot be looked upon as infectious growths; they are rather the result of repeated epithelial insults produced by chemical or mechanical means, and perhaps, indeed, by the irritative action of micro-organisms.

Although the etiology of carcinoma is not plain, Israel's views seem to be well founded. The manifest relation between cervical injuries and carcinoma need not be discussed. As for the parasitic nature of carcinoma, the burden of proof still rests with those who would account for it in this way.

Recognition of the earliest epithelial invasions in carcinoma, involving as it does histological elements in histological proportions, depends, I believe, upon histological methods.

It has been repeatedly urged that carcinoma of the cervix may as well be recognized by clinical means as by histological examination of excised tissue from the cervix. It is true that in advanced cases the microscope usually but serves the purpose of confirming the clinical diagnosis. During the past three years in Dr. Clark's service at the University Hospital, the diagnosis of cervical carcinoma has never been made by histological methods alone. In every case sections were taken and examined microscopically. This served to confirm the clinical diagnosis in well-marked cases or in strongly suspected ones settled the question one way or the other. This histological examination has several times prevented hysterectomy that would have been considered advisable in the absence of the help afforded by the microscope.

In no case, however, in which the clinical diagnosis was carcinoma has the histological examination failed to agree. And in no case so far has the microscope discovered carcinoma of the cervix where it was unsuspected. But it must be remembered that cases which find their way to the wards of a hospital are usually advanced cases. Kundrat's percentage of

forty must be looked upon as high. Furthermore, hospital cases usually fall into the hands of men who have had abundant opportunity in the differential diagnosis between benign and malignant affections of the cervix. One who is thoroughly familiar with the disease can diagnose carcinoma about as well by clinical means alone as the physician can recognize phthisis. A mistake in diagnosis by clinical means alone would doubtless be infrequent if all women with atypical discharge or hemorrhage could be immediately placed in the hands of a specialist.

With the average physician, who sees comparatively few cases of carcinoma of the cervix in his experience, an early diagnosis must of necessity be many times more or less problematical. It is in such instances that histological examination would be especially valuable. Outside of large cities there are many difficulties at times in securing the services of a consultant. The patient may feel indisposed to travel a long distance to have a consultation, and the expense of doing so, together with the objection which most women have to an examination by any other than their own physician, would often, I think, make the physician loath to advise this course strongly unless he was nearly certain of his diagnosis. Curettage and excision of portions of cervical tissue in such cases could be readily undertaken and the specimens submitted to a competent pathologist. In this way many cases of cervical carcinoma would be discovered in their incipiency. What has been said about my own experience with cases of Dr. Clark at the University Hospital, of cervical carcinoma, in no way casts doubt upon the value of the microscope. We unfortunately do not see these cases as a rule early enough to make the diagnosis entirely by histological means.

In carcinoma of the fundus there is a somewhat different problem. Here the parts are less accessible to the finger and to the eye. Many have argued that even here carcinoma gives indubitable clinical signs which are sufficient for a diagnosis. In a large proportion of cases this is true. But, on the other hand, there are many times when a benign condition may so closely resemble carcinoma as to be subjected needlessly to a radical operation; and there are cases of early carcinoma of the fundus which would never be diagnosed by clinical means alone.

In a previous paper⁶ I reported two cases in which, although

the physical signs pointed to carcinoma, microscopical examination of sections from the cervix and particles curetted from the uterus showed their benign nature. Without the assurance given by the microscope in these cases, the clinician would not have been justified in refusing to perform hysterectomy. One cannot afford to temporize in suspected cases. The diagnosis must be made at once. How often carcinoma has become hopelessly incurable while the effect of palliative treatment was being observed in an effort to establish the diagnosis! A case of Dr. Clark furnishes a very instructive example of a diagnosis made upon the histological examination of scrapings from the uterus. The clinical symptoms were not only negative, but, indeed, strongly indicated a benign process.

The patient, a single woman, aged 53 years, had complained for nearly a year of profuse bleeding at the time of her menstrual periods, which were undergoing the irregularity characteristic of the menopause. Pelvic examination showed a virginal condition of the external genitalia and cervix. The uterus was small, even rather undersized, and the adnexa were normal. Curettement was performed and the scrapings examined as a part of the regular routine following all curettements. I found in these scrapings an adenoma malignum beginning to undergo carcinomatous degeneration. The report was sent to Dr. Clark, who had some difficulty in convincing the family physician that hysterectomy was necessary. The case had seemed so undoubtedly benign at the time of the curettage that the family had been assured that no further treatment would be required. Under some lingering doubt hysterectomy was performed. Even after removal of the organ there was not the slightest indication that it was the seat of a malignant growth. A small fibroid nodule was found embedded in the cervical wall, and this was enough to explain the metrorrhagia. After the uterus had been opened, however, there was no doubt as to the correctness of the histological diagnosis.

One such case as this justifies the routine histological examination of cervical tissue or curettings in the face of a hundred cases in which such an examination proves to be unnecessary. Bearing these facts in mind, the physician should employ the microscope in all cases of metrorrhagia in which the diagnosis is not entirely plain. After every amputation of the cervical

lips the excised tissue should be routinely examined to detect whether a malignant has been mistaken for a benign process. In cases strongly suspicious of carcinoma a positive diagnosis can be made while the patient is under ether; so that if a malignant growth is found, hysterectomy may be immediately undertaken. Suitable sections for diagnosis can be prepared in fifteen minutes by means of a freezing microtome. It should be remembered that the cervical tissue excised for diagnosis ought to be a section through the entire suspected area; diagnostic curettage must include every part of the endometrium. Many times a failure of the microscope in these cases is to be attributed to insufficient material.

Excised portions of the cervix or curetted particles of endometrium should be placed for preservation in four per cent formalin; tissues improperly preserved are also unsuitable for a positive histological diagnosis.

Winter⁷ recently estimated the percentage of cases coming to his clinic in which the disease had not invaded the parametrium. In 240 cases he believes forty per cent were operable in the sense in which the term has been employed in this paper. He believes every case would be operable if it was taken at the first onset of symptoms. In order to increase the percentage of operability he advocates calling the attention of physicians and midwives to the proper course in every suspicious case. Every physician should be urged to pay the closest attention to any suspicious symptoms occurring in the child-bearing woman about the menopause, and to take every means at his command to determine at once if there is any possibility of malignant disease.

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SOCIETY PROCEEDINGS.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Stated Meeting, held February 1, 1904.

The President, Dr. James Hawley Burtenshaw, in the Chair.

GASTROPTOSIS.

Dr. W. V. V. Hayes showed a patient, a woman of 38 years of age, who first came under his observation three years ago, suffering from gastroptosis. She gave a history of severe gastric pain, which ran through to the back, coming on after eating and lasting for two or three hours. She vomited frequently, and was unable to obtain relief until the stomach was empty. Eructations of gas, anorexia and constipation were marked symptoms. The stomach, on examination, proved to be sensitive to the touch, and was displaced downward about the width of three fingers, as shown by the position of the lesser curvature. The functional signs revealed an adenasthenia gastrica, there being no free HCL and a total acidity of only 20. Tincture of nux vomica and fluid extract of condurango were administered. (Incidentally, in the course of treatment, she was relieved of a tape worm). The Vanvalzah-Nisbet bandage was applied to the abdomen. This bandage reverses the action of the ordinary corset and pushes the stomach upward and backward. Occasionally the use of a supporting bandage produces a decided change in the position of the stomach, but ordinarily this can hardly be expected. There was a distinct improvement in the condition of the patient. She had gained several pounds in weight, which doubtless helped to keep the stomach in better position. Her general condition was much improved and there had been practically no symptoms for three months. The supporting belt was no longer required.

She was given solutions of bicarbonate of soda and tartaric acid, about a minute apart, to demonstrate the improvement in the position of the organ, which was found to be two fingers' breadth higher than when originally observed.

ATROPHIC GASTRITIS.

This patient, a man of fifty years of age, was also presented by Dr. Hayes, who first saw him in 1897. The patient then gave a history of having suffered for about a year from vertigo, nausea, regurgitation of food and expulsion of gas three hours after eating, his appetite was poor, and there was a tendency to diarrhea and extreme nervousness. He had been moderately addicted to the use of alcoholic drinks, and had taken large amounts of strong medicines. He was treated for syphilis in 1890-1891. Analyses of the stomach contents during the past six years gave practically the same results. The total acidity ranged from 6 to 10. No free hydrochloric acid was found. Ferments were absent, but mucus was always present. The condition was one of atrophy of the mucus membrane. The speaker said that there had been very little change in the condition of the patient and there would probably be very little, so long as the motor function of the stomach was retained and the intestinal compensation maintained, but if these should fail very little could be done to help him. During the six years the stomach had practically done nothing except to pass the food onward. This patient demonstrated how a person with atrophic gastritis may live for a long time in comparative good health.

Dr. Morris Manges opened the discussion of the second patient presented by Dr. Hayes. He called attention to the statement which had been made in the presence of the patient that large quantities of the iodides which the man had taken were probably responsible for the atrophic gastritis. The speaker said that in his opinion atrophic gastritis was one of the most complex and least understood of all diseases of the stomach. There is no positive evidence as to whether it comes from the mucosa or the submucosa further down. It is known that cases of pernicious anemia exist and are associated with atrophic gastritis. The exact pathological classification is unknown. As regards the influence of strong medicines in the causation of gastritis, it may occur as well in the late stages of alcoholism, but that is an entirely different picture. Atrophic gastritis is largely due to changes in the portal circulation, secondary to changes in the liver itself, and there is a clear dis-

tion in the etiological elements of the cases, and subsequent changes have nothing whatever to do with the disease. Many syphilitics have had larger doses of iodides than the patient under discussion, and no atrophy resulted. but the patients derived the greatest benefit from this medication. The speaker said he prescribed for all cases of atrophic gastritis 5 to 7 minims of hydrochloric acid at each meal, for the remainder of their lives, and thought that this treatment and the motility of the stomach were the chief factors in the disease.

DERMOID CYST.

Dr. James P. Tuttle showed a very unusual specimen of a dermoid cyst. There was practically no history until the day previous to the operation, when the patient, a girl about eighteen years of age, went to the office of her family physician and complained of difficulty in making her bowels move, and excessive pain when they did move. She was given an enema and a laxative. The next morning she had a chill. Examination then revealed a tumor in the left inguinal region about the size of a small orange. Her temperature was about 100 degrees F. Three hours later the tumor had apparently increased about two-thirds in size, and the girl's temperature was 102 degrees F. Dr. Tuttle was called in consultation and found her with a temperature of 102 degrees F., inability to move her bowels, and a fluctuating mass in the left iliac region and in the recto-sigmoidal juncture. His diagnosis was hematoma. The following day her pulse was faster and there seemed to be hemorrhage, so the vagina was opened through the posterior cul-de-sac, and about six ounces of clear, serous fluid was evacuated. Passing his hand further up, a large tumor was found, and the operator, supposing it to be an abscess, poked his finger through a rent in the apparent capsule, and fluid gushed forth, which, on bacteriological examination, proved to be filled with fat. Inside the capsule was a tumor, which was removed through the vaginal opening. On one side of the tumor were four protuberances, just in line. This mass, which was on the left side, was attached by a pedicle to the posterior surface of the right lobe of the liver. The tumor had apparently been lying in the posterior cul-de-sac and the hemorrhage pushed the tumor up to the position in which it was found at the time of operation.

Dr. J. Riddle Goffe said that Dr. Tuttle's specimen was a remarkable one. These masses are commonly found in connection with the ovaries, and the more he thought of the development of a dermoid teratoma, the more inclined he was to believe that it was necessary for some form of degenerate conception to have occurred previous to their development. However, in the specimen under discussion, this was probably not true, as the patient was a young girl, and Dr. Tuttle said that both ovaries were present and absolutely undisturbed. It seemed that one might trace a faint outline of a fetal mass, the larger projection at the top of the mass representing the head, two projections lower down for the shoulders and arms, and two at the other end for the lower extremities.

VESICAL CALCULI.

Dr. E. L. Keyes, Jr., presented a large number of specimens of vesical calculi, and gave a most interesting talk on the formation of these stones, the differences in their composition and appearance and the procedure by which they had been taken from various patients. He said that the first interesting feature about stone in the bladder is the different varieties that occur and the manner in which they may be distinguished from each other. If the bladder is opened and the specimen taken out whole, the stone presents one picture, and if it is crushed and sucked out through the urethra, the picture differs. The first specimens shown represented stones under the two forms.

The first distinguishing characteristic of these calculi is that they are either primary or secondary. The primary stone forms itself for no reason that can be recognized; the secondary stone is formed by the inflammation produced by the primary stone. While there are a great many different varieties under either head, the chief groups are the oxalate of lime stone, the uric acid stone, and the urate of soda stone. There are many kinds of secondary stones, but they are all modifications of one mixed mass of the various phosphates, and are known as mixed phosphates stones. Among one hundred and fifty stones, all of which had not been examined chemically, the speaker said that, as far as he knew, all were included in one of these four classes.

Specimens were shown representing four different varieties of stone under two different guises. Some were composed of

oxalate of lime, and were very irregular in shape. For this reason they are sometimes known as mulberry stones. The color is not very clearly brought out, but they vary in shade. A urate stone shown at the same time was distinctly lighter in color than the mulberry stone, and the surface of the former was much more regular, but not entirely smooth. The phosphatic stone is smoother and somewhat resembles white agate in appearance. In the crushed specimens the color is much the same as in the whole stones, but is more distinct. The primary stones are all distinctly darker than the secondary phosphatic stones. Very frequently uric acid and urate stones are mixed in one deposit. Both have a distinctly reddish hue, as compared with the brown of the oxalate.

A point worth noting is that the secondary stone sometimes forms as the result of inflammation caused by the primary stones; consequently in many secondary stones the beginning is primary, and the primary stone rolls about in the bladder, cystitis results, and changes occur in the alkaline urine, which throws out phosphates which are deposited on the primary stone. The speaker showed one stone which had existed for many years as a primary stone before it developed a phosphatic covering. The proper bacteria were not present to render the urine alkaline; a cystitis must have been present for many years before it became alkaline. Another specimen was an oxalate stone through which peaks of oxalate showed through the deposit of phosphatic covering. One great English authority, Dr. Morris, places the percentage of uric acid kidney stones as high as ninety-five percent: in other words, of the many phosphatic stones removed from patients, the greater number are formed under nuclei of uric acid stones.

The speaker next showed the largest stone in his collection, which was taken from a man thirty-six years of age. The stone had existed for thirty-five years when the patient went to Bellevue Hospital in 1860. A diagnosis of cancer of the bladder was made, and he died without an exploratory operation, exploratory laparotomies not being as common then as now. At an autopsy a stone thirteen ounces in weight was discovered, which was unquestionably the cause of death. The interior of the stone is oxalate, covered by layers of phosphatic deposit. In the oxalate stone the outside and inside

are "bumpy," so to speak, and there is no regular formation, while in a uric acid stone in the collection there are systematic thin layers, one upon the other.

The shape of a calculus is sometimes interesting, but not important, perhaps. The stone generally takes the shape of the cavity in which it lies, in a general way. All the stones are concentrically formed. There is a nucleus of what may be termed a "foreign body"—either an actual foreign body or formed from the salts of uric acid. Layers of the same substance or of a new substance keep forming, and in a general way there is a roundish shape, with the exception of the oxalate stone, in which, in certain cases, the nucleus is not central. The speaker showed several stones which had formed upon nuclei of actual foreign bodies. One or two had formed upon the ends of catheters which had broken off in the bladder, and one especially interesting specimen which had formed on the end of a hair. The patient developed a tumor with a hairy surface, and the inflammation thus set up caused a cystitis with alkaline secretion, and phosphates were thus deposited on the hair. There were thirty-one small stones, each formed in the same manner, at the end of a hair.

Dr. Charles H. Chetwood presented two specimens of vesical calculi which he thought of special interest in connection with the general consideration of the subject by Dr. Keyes. The first specimen presented had been removed from a three-year-old child about a week previously in the clinic. The size and compactness of the specimen were such that he thought it probably a fetal formation. The diagnosis was made with a silver probe, with which he touched the stone without difficulty. A suprapubic incision was made and the stone removed. It weighed 5.44 grammes. The patient has a suprapubic fistula, which the speaker thought would heal in a few weeks. The other stone formed upon a broken-off catheter, and was removed from a patient 72 years old who had an enlarged prostate. It weighed 10.44 grammes and was composed of triple phosphates and ammonium urate. The catheter nucleus was broken off in the bladder some three years before the calculus was removed.

CYSTIN CALCULUS.

Dr. Manges showed a cystin calculus which he thought particularly interesting because there are probably not more than

fifteen specimens in the entire world. The stone, which weighed fifty grains, was passed spontaneously by a boy twenty years of age. The patient disappeared, so that no chemical analysis could be made. These stones are closely associated with a putrefaction which goes on in the intestines and are excreted in the urine as well. This disease often occurs in families, but the chemical analysis is unknown.

Dr. Manges showed two specimens of renal calculus, and the kidneys from which they had been taken. A patient who was operated on for the relief of difficulty in secretion of urine died, and upon examination it was found that extreme atrophy of the kidney had resulted from the impaction of a stone in that organ.

The second specimen was a very good demonstration of the stone in situ. A very large kidney had been packed with stone, which had in time caused a hydronephritis. At the lower end of the specimen, part of the kidney could be seen beyond the pelvis, showing what extensive changes may be produced by the long residence of stone in the kidney.

X-RAY DEMONSTRATION OF STONE IN THE URETER.

Dr. Albert Kohn presented an X-ray photograph of a patient who had suffered from attacks of colic for fifteen years. His symptoms were relieved by hypodermic injections of morphine. After one of these attacks he had a chill, and the diagnosis of "surgical kidney" was made and a surgeon called. The patient was removed to a hospital, where he could be watched for confirmation of the diagnosis, and three days afterward he developed a second attack and one week later a third attack. An exploratory incision was made into the kidney, and no stone was found, but there was an acute infection. This wound barely healed when the patient had another attack of colic, followed by a chill. The surgeon went in from below and catheterized the ureter and found what he thought was a stricture. The patient was sent to have an X-ray photograph taken and fortunately the stone lay directly in line with the photograph. The surgeon cut down on the ureter and removed the stone.

RENAL CALCULUS.

Dr. J. Riddle Goffe presented a specimen of renal calculus removed by him from a woman aged 40 years, who was sent

to him for operation for ovarian cyst. She had suffered from severe pain, from chills and fever, for about six months, and was treated for malaria. Her urine had been examined several times and no pus had been found. Upon examination it was found that she had a large tumor, which had no connection with the pain, and upon opening the kidney a large stone was discovered, which blocked the passage. It was removed without difficulty and without opening the ureter.

The speaker said that the specimens of calculus growing upon the end of the hair, showed by Dr. Keyes, recalled to his mind a patient, a female, aged 45 years, who several times a year, plucked tufts of gray hair from her anus. It always reappeared in a few months. She had a tumor, and on operating a large dermoid cyst was found, and over the pelvis it had lacerated through the rectum and the rectum had closed around it. This was the origin of the tufts of hair.

Dr. F. M. Jeffries said it is impossible to give a definite explanation of the etiological factors in the formation of these calculi. A number of theories have been advanced. One thing is certain; three factors must be present before calculi can be formed: 1. The chemical constituents of the urine; 2. nidus; 3. a substance capable of entering into and making a stroma. It is true that two substances at least manifest in themselves a cohesive power, as seen in uric acid of roseate crystals and in calcium oxalate where the crystals are found in rare spherical and dumb-bell shapes. The reaction of the urine will control the kind and variety of stone that is formed, an acid urine allowing only those to form that are insoluble in the acid, and an alkaline urine causing those that are insoluble in alkaline. As regards the nidus, Dr. Keyes had shown a number of specimens in which it was crystal; what forms on that afterward depends on what takes place in the bladder. One substance which Dr. Keyes did not mention, which is sometime found forming the nidus, is a blood-clot. A peculiar feature regarding the formation of calculi is that they are particularly liable to occur in particular, definite, fixed localities, while territories in the close vicinity may leave their population comparatively free from this affliction. This led to a strong opinion that the variety of waters might have something to do with their formation, but investigations on this line have not thoroughly satisfied those who adhere to this theory.

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EDITORIAL.

THE EXTRA-GENITAL CHANCER.

This is a lesion which is very interesting to the syphilologist and more so to the student of medicine. But it is full of interest and importance to the general practitioner, more especially to him who is located at a distance from a large centre of population and whose practice lies among those who have no idea of what a venereal disease is or who have never heard of the "social disease," as Dr. Morrow has very aptly designated it. And it is these who should make a particular study of syphilis from the fact that it is very prevalent in those districts which are remote from the larger centres of population. If there be one a victim of syphilis it is hushed up, and if his physician has perchance recognized the disease it remains a secret; he gets married and his wife innocently bears a brood of children suffering from congenital syphilis, the nature of the disease remaining unknown until some specialist in a large city

lays his finger upon the festering spot. Thus it is that syphilis in some cases will become disseminated among individuals living under the best hygienic conditions, who are endowed with otherwise good, healthy constitutions, and become the foci of one of the greatest scourges of humanity. Too many practitioners rely upon this supposed knowledge of their clientele and will not even think of the possibility of one being infected by the luetive taint when it is but too notorious that many of them come to the city secretly to be treated for their troubles.

But it is not of this that we intend speaking; it is rather of those cases which are puzzling even to the city physicians who have not had an experience such as that enjoyed by syphilologists. The latter are always on the lookout, where the others do not think of the matter, and as a natural consequence they discover those things which entirely escape the observation of the former. The syphilologist remembers the dictum of Ricord, "If there be a syphilitic eruption, look for the chancre and you will find it." And to continue the sayings of this master of syphilology, "When you find a chancre, look for the indurated glands which follow it as surely as the shadow does the body projecting it." There are but too many who have neglected these teachings which are certainly sound in their advice. The physician who notes a syphilitic eruption and knows it will find the chancre, and he must not stop his search for it until he finds it; and in many instances he will be rewarded by the discovery of an extra-genital chancre which has been treated for something else under the mistaken idea that the patient could not have anything of the kind or that it was some other lesion of a very stubborn character. Such cases have been so numerous that it would be a mere waste of time to attempt to enumerate but a very small portion of them. Everyone almost can recall one or several coming within his experience.

Our readers will certainly see the usefulness to themselves and advantages to their patients, who may have been so unfortunate as to contract syphilis, of making the proper diagnosis and giving the proper treatment for the disease which has been diagnosed. Let them discard the false idea that any one is not liable to be syphilitic, for a reading of Bulkley's work on "Syphilis in the Innocent" will show them how a chancre may be acquired in the most innocent way mediately or by actual

contact, and extra-genital chancres transmitted to those certainly above all suspicion. There is no social condition, age, or other circumstance which renders any one immune, and the fact that an extra-genital chancre exists does not argue against the virtue or probity as well as innocence of its carrier. It is but too often that a child or a *virgo intacta* becomes the bearer of the primary lesion of syphilis who when informed of the nature of the disease is as ignorant as before it appeared. The great trouble with many lies in the fact that they argue depravity as a natural concomitant of syphilis and cannot imagine that a syphilitic can be innocent although afflicted with the disease. They would argue with equal truth that an infant with hereditary syphilis has been guilty of depravity. The conditions surrounding every case must be taken into consideration, and everything in connection with it be fully weighed before any conclusions are arrived at or opinions given.

Of course, some cases point to total depravity, but they are exceptional and easily recognized. They are dangerous as they are the most active factors in disseminating the disease. These are easily recognized and are fit subjects to be warned in their meteoric career of crime. We will not continue the subject at this time, but may revert to it on some future occasion when it seems more propitious for the pursuit of the subject.

AMERICAN MEDICAL ASSOCIATION MEETING.

This national medical event will take place at Atlantic City, New Jersey, June 7, 8, 9 and 10, 1904, and it promises to be a record breaker both in point of attendance and in the value of its scientific contributions to medicine. It will afford our Eastern brethren ample opportunity to read papers and to add their by no means slight contributions to the general fund of medicine and surgery, which is invariably furnished by the members of the Association. This is not meant to say, of course, that the West will not contribute its contingent and, if we are to judge from present indications, it will do its full duty to a man. Atlantic City is delightfully situated on the Atlantic coast and is singularly free from Jersey mosquitoes, so that this latter

need not act as a deterrent to prevent any one from attending. We are sure that all those who have visited this pleasant summer resort will jump at the opportunity of going there once more. It is as good a place as any that could be chosen to hold a meeting and we have no doubt that every member of the Association will be glad that he went there. The accommodations are good and ample and the Committee of Arrangements has so managed affairs that the prices will be moderate. In fact, everything has been arranged in such manner that every one will be made to feel pleasant and comfortable.

What will be one of the chief sources of comfort and gratification in attending this meeting will, no doubt, be traveling on the Baltimore and Ohio Southwestern Railway, which will have trains to Atlantic City without change. At the present writing the fare will be one and one-third the regular rate on the certificate plan. The rate is as low as any road can furnish, but the service is superior to any. All delegates west of the Mississippi River should see to it that their railroad tickets are made over the B. & O. S-W., and we are certain that those from St. Louis, and they are not few, will go over the only line which can serve them in a proper and efficient manner. We can heartily recommend this railway line and can invite all our readers to choose it as their medium of transportation to Atlantic City.

The Danger of Administering Sodium Chloride to Patients with Bright's Disease or Cardiac Affection with Threatened Anasarca.—M. J. Courmont recalls the fact that the equilibrium of molecular "isotonia" in the system is maintained by the elimination of ingested salts by the emunctories, these salts having become hypertonic attract the watery part of the serum and cause edema. When, therefore, the kidneys become impermeable to sodium chloride, this substance passes into the tissues and causes edema. Hence, if a patient have reached the stage of dropsy it is dangerous to let them take salt unless the kidney eliminates it. Injections of artificial serum may thus become elements of great danger.—*Med. Record.*

BOOK REVIEWS.

Precis d'Urologie Clinique, PAR AUGUSTE LETIENNE et JULES MASSELIN. 8vo, pages 463. Avec 58 figures et une planche hors texte. [Paris: C. Naud, 3 rue Racine, 1904. Prix, 12 francs.

MANUAL OF CLINICAL UROLOGY. By Auguste Letienne and Jules Masselin. 8vo, pp. 463. With 58 figures and one plate. [Paris: C. Naud, 3 rue Racine, 1904. Price, 12 francs.

There is quite a number of standard works published in English on the subject of urinology, and many have gained a place for themselves which has earned for them a lasting position among those which shall ever be regarded as reference works. No one there is who will deny the importance of the subject in view of the great and recent advances in the art of scientific diagnosis and rational treatment. It is for this reason that every new work is read with interest, and when it so happens that the subject is considered along new lines an added interest is brought to the subject. It is, in great part, to this latter cause that we must attribute whatever new interest may be felt in the subject as developed in the book before us. The new point is one out of the ordinary and the matter has been treated in a masterly manner by the authors of this, one of the latest, products of the French medical press.

According to the authors, urology is a complex biologic science and it cannot be looked upon as belonging exclusively to chemistry. The clinical analysis of urine stops at ponderable results. From a purely clinical point of view what significance are we to grant to it? What benefits may clinical medicine derive from it? What importance and what significance are we to attribute to abnormal urinary elements? is a question to which the authors of this work endeavor to make a response and furnish a satisfactory solution. The book is not a small manual of chemical urology, but rather a treatise on abnormal urine as viewed from a chemical, anatomical and biologic point. It is a work which enters into a consideration of the subject in a thorough and almost enthusiastic manner. It is a work which may be consulted not alone for the general data, but for the more minute points in connection with urology. In fact, it is a complete work without being prolix, and it is thorough without being tiresome. We very much regret that there is no English translation, for we are convinced that such an one would immediately spring into favor with the English reading members of the medical profession.

The book before us contains all those facts in anatomy, physiology, histology, and pathology which may be useful to anyone who wishes to know urinary biology. There is given a methodical description of the most reliable and certain ways of dosage as well as the latest and most practical. Urinary biology is taken up and urinary microbiology which today tends to assume such a great importance in the history of the diseases of the urinary system. It describes the latest methods of exploration of the kidneys, of the ureters, etc.

The book is divided into four parts. Part I. is devoted to the anatomy of the kidneys and to the normal urine in adults and in children. In Part II. we are given a thorough discussion of pathological urine, including calculi. Part III. contains descriptions of the clinical methods employed in exploring the kidney. The concluding portion, Part IV., deals with the bacteria and parasites of the urine. This is a highly interesting part. The illustrations are all good, and the plate of spectra of oxyhemoglobin, reduced hemoglobin, urobilin, and biliary pigments is excellent and well made. The entire work is well printed on excellent paper, and will make a useful addition to any medical library.

Subjective Sensations of Sight and Sound, Abiotrophy, and other Lectures. By SIR WILLIAM R. GOWERS, M.D., F.R.C.P., F.R.S. 8vo, pp. 250. With eighteen figures. [Philadelphia: P. Blakiston's Son & Co., 1904. Price, \$2.00 net.

Any one who has read the lectures of Gowers knows that they are all interesting and full of information as well as of the most useful data. In the present volume we are given lectures which have been separately published in medical journals but have undergone a revision by their author. We can not imagine any physician not being interested in their reading, and the author certainly can not be accused of threshing old hay for us in his lectures. He certainly presents his subjects in a new light and one that is strong and makes all things clear. The first two lectures on Subjective Visual Sensations and Subjective Sensations of Sound are of the highest value to all those engaged in the study of medicine and more particularly to those who treat diseases of the eye and of the ear. To these latter there are many things of the highest importance as well as of usefulness. Abiotrophy: Diseases from Defect of Life is a well considered dissertation which trenches somewhat on heredity and takes up the subject of defect of life in organs and tissues as explaining many phenomena daily observed and giving rise to neither ordinary interest nor a desire to seek for an explanation therefor. The author certainly handles this subject in a most interesting manner.

Myopathy and a Distal Forum is a clinically useful lecture, and equally so is the next lecture on metallic poisoning. In this he speaks of but two metals, lead and arsenic, but very justly points out possible errors in diagnosis due to certain symptoms observed. Syphilitic Disease of the Nervous System is a subject which permits the author to show his true power in the knowledge he possesses of the nervous system, and the particular effects produced by the luetic disease. One of the most striking lectures is that entitled, Inevitable Failure; A study of Syphilitic Arterial Disease. He thoroughly analyzes a case, giving the true diagnosis but with unsuccessful treatment, which leads him to say that diagnosis without treatment is "thistledown without seed." His entire lecture is one well worthy of study and consideration. Syringal Hemorrhage into the Spinal Cord and Myasthenia and Ophthalmoplegia are well considered lectures dealing with particular subjects in neurology. The concluding lecture on the Use of Drugs is a medico-philosophic one, and in this the author endeavors to point out the resemblance of the most innocent to the most dangerous drug, the varied action of drugs on different portions of the nervous system, and draws conclusions concerning the potentialities of drugs, reasoning from the very small portion of whatever we know of their action. We will not continue as the name of Gowers is certainly sufficient in itself to constitute a guarantee that his lectures are of the best.

Infant-Feeding in its Relation to Health and Disease. By LOUIS FISCHER, M.D. Third edition. 8vo, pp. 357. Containing 57 Illustrations, with 24 Charts and Tables, mostly Original. [Philadelphia: F. A. Davis Company, 1903. Price, \$2.00 net.

A book which receives a call for a new edition within six months after the appearance of the preceding one should certainly be reckoned a success, and this is exactly the treatment which has been accorded the one before us. This has been due to the fact that it is both well written and practical. That the present one will prove a success we do not doubt, more especially when it is considered that the book has undergone a careful revision and that many chapters, have been added, notably one on "Infant-Feeding in Summer Complaint." This alone should make the book much sought after as the deaths of infants from this affection are such that the number is appalling. The author has very judiciously hearkened to the words of the reviewers and acted upon their criticisms, with the result of the most excellent and improved book before us. We can readily note the improvement, and those who have occasion to use it as a guide will find that it is more reliable and trustworthy than it ever was, albeit it was a most excellent guide.

The author deals very thoroughly with milk in all its aspects. Cow's milk he insists upon being thoroughly pasteurized and it may be said that the whole keynote of the book is asepsis of the food intended for the nutrition of the infant. Artificial foods must be adapted to the purpose for which they are intended and be in conformity with the needs of the infant. Nipples must be thoroughly cleaned and so chosen as to best serve the purpose for which they are intended. The so-called "baby-comforter" is very justly condemned by the author as it is conducive to the provocation of none but ill effects. The book is filled throughout with good advice, and whilst many of the methods are only susceptible of application in maternities a sufficient number is given for use in the home. The book concludes with a dietary which the practicing physician will find of the highest practical use. The different articles of diet which are given, together with directions for preparing them, are good and cannot but act with benefit when their use is under the guidance of a competent physician.

The publishers have made this a well printed book, upon excellent paper and strongly bound. It is one which a physician should always keep in a handy place for ready reference. We cannot recommend it too highly.

Le Sens des Attitudes. Par PIERRE BONNIER. 8vo., pp. 115. [Paris: C. Naud, 3 Rue Racine, 1904. Prix, 3 francs 50.

THE SENSE OF ATTITUDES. By PIERRE BONNIER. 8vo., pp. 115. [Paris: C. Naud. 3 Rue Racine. Price, 3 francs 50.

This is a most interesting study in psychology which the author foreshadowed in his work on orientation. He writes in a dialectic manner on his subject and shows his complete familiarity with psychologic problems. He opens with a chapter on the sense of attitudes. This he follows with the vegetative life, the life of relations, and then takes up the sense of the position of the limbs. Kinesthetic sensations are pretty fully considered and the muscular sense and the sense of space. Direct subjective orientation, indirect subjective orientation, sensorial orientation, visual orientation, auricular orientation, and tactile orientation each occupies a chapter. The stereognostic sense occupies the attention of the author, after which he devotes some observations on irreducibility and reductibility. Psychomotricity is thoroughly considered although but very little space is devoted to it. Distant orientation is spoken of, and the work terminates with psychic orientation. The author so explains every phase of his subject that what at first seemed to be a chaotic mass of words given in psychologic terms soon becomes clear and easily understood by means

of his explanations and proffered examples; so much so, that what at first blush would have been thrown aside becomes interesting and even fascinating.

The author writes a very good French, and he knows how to take advantage of the pliancy and grace of that language. He who knows it will certainly not relinquish the reading of this work until he has completed it and will be tempted to read it again and again.

Report of the Board of Health on a Second Outbreak of Plague at Sidney, 1902. By J. ASHBURTON THOMPSON, M.D., D.P.H., President. Govt. 4to., pp. 80. With two maps. [Sidney: William Applegate Gullick, Government Printer, 1903. Price, 2s. 6d.]

This is a very interesting report, more especially to those who have read on the plague in Australia. The author, who is Chief Medical Officer for the Government, has made a thorough study of the subject and presents his observations and conclusions in a manner of the highest scientific value as well as interest. The report is divided in three parts. In Part I. is given an account of the Epidemic. Part II. deals with the mode of spread; and it is in this part that the author demonstrates his ability in the observation and handling of an epidemic of this sort. In Part III. is considered the epizootic in relation to the epidemic. The author considers the time and place relations, and follows this with notes on general experience with the epizootic. The species of rats affected are noted as well as the mode of infection. Dr. Frank Tidwell makes two contributions, one on the mode of infection and the other on the ecto parasites of the rat, the latter being illustrated by two plates. The report ends with an appendix in which are given date of attacks, adjudged places of infection, and grouping of 139 cases of plague. The whole report is well worthy of study by those who devote any serious study to the problems involved in the preservation of public health.

The Relation of the Cervical Sympathetic to the Eye. Papers read before the Section on Ophthalmology of the American Medical Association, at the Annual Session, New Orleans, May, 1903. 8vo., pp. 119. [Chicago: Press of Am. Med. Ass., 1904.]

This is certainly an interesting little book, more especially to those who have paid any extended attention to the subject. There are four papers embraced in this collection and each one is interesting not alone to the ophthalmologist, but should prove so to the intelligent physician in general practice. Dr. G. E. de Schweinitz writes on the "Pathology of the Sympathetic in Relation to the Eye"; Dr. William H. Wilder on the "Influ-

fluence of Resection of the Cervical Sympathetic Ganglia in Glaucoma"; Dr. James Moores Ball on the "Influence of Resection of the Cervical Sympathetic in Optic Nerve Atrophy, Hydrophthalmias and Exophthalmic Goitre"; and Dr. John E. Weeks on the "Pathology of the Cervical Sympathetic." These papers form a symposium which should certainly make an era in ophthalmic literature. All the papers are above the ordinary in excellence and the names of their authors are sufficiently well known to lead us to expect as much. The paper of Dr. Ball is an especially good one, written in a thorough manner and of more than ordinary value to the ophthalmic operator and physician. All those who are interested in eye diseases should make it a point to have this book.

The Man Who Pleases and the Woman Who Charms. By JOHN A. CONE. 16mo, pp. 131. [New York: Hinds and Noble. Price, 75 cents.

This little book contains much that is interesting and useful. From a reading of it we should judge that the key-note as well as the solution of the problems submitted is "good form," and to acquire this one must come in contact with those who possess this quality in a well developed form. The author has well written on his subject, and we are pleased to note that he insists so much upon thoughtfulness and kindness, two of the most charming graces that can be possessed by man or woman. They will naturally lead to courtesy and confer those qualities of which the author of the little book before us speaks. It is a book which should be placed in the hands of the youth of both sexes.

The Worth of Words. By DR. RALCY HUSTED BELL. With an Introduction by DR. WILLIAM COLEY COOPER. Third Edition, Revised and Enlarged. 12mo, pp. 307. [New York: Hinds and Noble. Price, \$1.25.

This is practically a book on synonyms intended for school purposes. One grave objection we have to it is that there is not enough of it. The author is certainly not an adept in slang and, in our opinion, this portion could have been omitted with profit. It is certainly unnecessary to attempt to discriminate upon the fine differences in the shades of meaning of cant words, for it matters but little to those who use them. Taken as a whole, the book may be set down as an excellent one which will prove of great profit to those who attend school and will aid them much in the acquirement of good English.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Howe's Handbook of Parliamentary Usage. By Frank William Howe. [New York: Hinds & Noble. Price, 50 cents.

Le Sens des Attitudes. Par Pierre Bonnier. 8vo. pp. 115. [Paris: C. Naud, 3 rue Racine. 1904. Prix, 3 francs 50.

The Man Who Pleases and the Woman Who Charms. By John A. Cone. 16mo. pp. 131. [New York: Hinds & Noble. Price, 75 cents.

Précis d'Urologie Clinique, Per Auguste Létienne et Jules Masselin. 8vo. pp. 463. Avec 58 figures et une planche hors texte. [Paris: C. Naud, 3 rue Racine. 1904. Prix, 12 francs.

The Worth of Words. By Dr. Ralcy Husted Ball. With an Introduction by Dr. William Coley Cooper. Third Edition, Revised and Enlarged. 12mo. pp. 307. [New York: Hinds & Noble. Price, \$1.25.

Subjective Sensations of Light and Sound, Abiotrophy, and Other Lectures. By Sir William R. Gowers, M.D., F.R.C.P., F.R.S. 8vo. pp. 250. With 18 Figures. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, \$2.00 net.

Infant-Feeding in its Relation to Health and Disease. By Louis Fischer, M.D. 8vo. pp. 357. Containing 57 Illustrations, with 24 Charts and Tables, Mostly Original. Third Edition. [Philadelphia: F. A. Davis Company, 1903. Price, \$2.00 net.

The Relation of the Cervical Sympathetic to the Eye. Papers read before the Section of Ophthalmology of the American Medical Association at the Annual Session, New Orleans, May, 1903. 8vo. pp. 119. [Chicago: Press of Am. Med. Asso., 1904.

Report of the Board of Health on a Second Outbreak of Plague at Sydney, 1902. By J. Ashburton Thompson, M.D., D.P.H., President. Gov't 4to. pp. 80. With 2 Maps. [Sydney: William Applegate Gullick, Government Printer. 1903. Price, 2s. 6d.

The Medico-Chirurgical Journal has adopted an ornate cover in colors which is certainly a great improvement and shows good taste. The subscription price remains at one dollar per

year, and the college of which it is the official organ is certainly to be congratulated upon its offspring. It has been ever improving and we certainly are pleased with this new evidence of its prosperity.

The Colorado Medical Journal devoted its March issue to Pulmonary Tuberculosis and made this its special tuberculosis number. The *Maryland Medical Journal* also issued a similar number, and both these publications will afford a feast to medical readers such as is not usually presented to the readers of medical journals. This method of presenting a symposium on one subject by various authors is being adopted by medical publications and it is certainly a step in advance adopted by medical publications.

Howe's Handbook of Parliamentary Usage is a very handy little book so constructed that any point in parliamentary law and usage may be determined in a moment. This little *vade mecum* contains 52 pages and about thoroughly covers the subject. In addition to the parliamentary rules it has "hints" which will prove useful to the old as well as the young parliamentarian, and the portion devoted to the qualifications of a chairman is well written. The publishers of this handy little guide are Hinds & Noble, of New York City, who issue it at the price of 50 cents.

Biographie Scientifique.—J. B. Baillière et Fils, 19 rue Hautefeuille, Paris, have issued a general catalogue of books on science. This contains the detailed announcement, in alphabetical order, of the names of about five thousand works on medicine, natural history, agriculture, veterinary medicine, physics, chemistry, technology and industry. In addition to this there is an index of 17 pages which gives the names of the various authors with cross references. This catalogue, which is indispensable to writers and students, will be sent free on application by prepaid answer postal card to the publishers.

The Merging of Two Medical Journals.—Messrs. E. B. Treat & Co., the publishers of the *International Medical Magazine* and of *Archives of Pediatrics*, have concluded to merge the two journals. During the five years that Dr. Boardman Reed had charge of the *International Medical Magazine* it was his constant aim to have the periodical of the highest character, readable and reliable. The publishers regret that they must discontinue the *Magazine*, and extend to Dr. Reed their appreciation of his editorial labors. It is hoped that the friends of the *International Medical Magazine* will continue their interest by reading *Archives of Pediatrics*, and thus extend its field of usefulness.

The above announcement appeared recently in the *Archives* and we very much regret to note the suspension of such a sterling publication as the *International Medical Magazine*. The merger we know will gain strength by the change and will become a better publication than the *Archives* has been, if such be possible. The *Archives of Pediatrics* will retain its name and we do not doubt that it will increase its list of subscribers.

MELANGE.

North Carolina Medical Society.—The annual session of the North Carolina Medical Society will meet in Raleigh, May 24-26, instead of May 31-June 2d, as formerly published. The Board of Medical Examiners will meet May 18, instead of May 25.

Next Meeting of the Mississippi Valley Medical Association.—The thirtieth annual meeting of the Mississippi Valley Medical Association will be held at Cincinnati, O., October 11, 12, 13, 1904. Dr. B. Merrill Ricketts has been elected chairman of the Committee of Arrangements.

The following are the officers of the Association elected at Memphis: President—Edwin Walker, M.D., Evansville, Ind.; President-elect—Hugh T. Patrick, M.D., Chicago, Ill.; First Vice-President—Bransford Lewis, M.D., St. Louis, Mo.; Second Vice-President—Geo. W. Cale, Jr., M.D., Springfield, Mo.; Secretary—Henry Enos Tuley, M.D., Louisville, Ky.; Assistant Secretary—S. C. Stanton, M.D., Chicago, Ill.; Treasurer—Thos. Hunt Stucky, M.D., Louisville, Ky.

The following resolution was offered by Dr. S. P. Collings, of Hot Springs, Ark., at the Memphis meeting:

Whereas, The value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of vision and hearing often leads to disease of these structures; therefore, be it

Resolved, That it is the sense of the Mississippi Valley Medical Association that measures be taken by boards of health, boards of education and school authorities, and, where

possible, legislation secured, looking to the examination of the eyes of all school children, that disease in its incipency may be discovered and corrected.

The Position of the Head in Cerebellar Disease.—Posture in relation to disease is a subject which for a long has aroused much interest, and probably from prehistoric times has to some extent guided efforts to relieve distress and directed discriminating observers. And in no group of morbid affections is scientific study of posture of greater assistance than in derangements of the nervous system. In the current number of *Brain*, Dr. Frederick E. Batten seeks to afford adequate answer to such questions as, Is a definite attitude of the head assumed in man in cases of cerebellar disease? Does the position correspond with that produced by experimental lesion, and, if so, can the sign be used as a symptom of diagnostic value? and, Is the position assumed in cases of intracranial disease in which no gross lesion of the cerebellum can be found? The conclusions are not only of interest to neurologists, but likely to be of service to many practitioners. A definite attitude of the head is not infrequently seen in cases of cerebellar disease in man, that position being with the ear approximated to the shoulders on the side opposite to the lesion, and with the face turned up to the side of the lesion. This position of the head, so far as the approximation of the ear to the shoulder is concerned, is the reverse, while the position of the face is the same as that seen after experimental ablation of one lobe of the cerebellum. But as regards its diagnostic value, it has to be admitted that the position is sometimes present in cases in which there is no gross lesion of the cerebellum. Dr. Batten, therefore, indicates that while it may be said that as an additional and confirmatory sign of cerebellar tumor the position assumed by the head is of value, too much importance should not be attached to its presence alone, or when opposed to symptoms which have been shown to possess greater diagnostic value.—*Medical Press and Circular*.

A Tuberculous Iodide of Potash Eruption simulating histologically an epithelioma is described in the February issue of the *Journal of Cutaneous Diseases including Syphilis*, by Dr. Douglas W. Montgomery. The case occurred in a man of 52,

who had always enjoyed good health with the exception of an attack of muscular rheumatism three years before. Three years before he had acquired syphilis for which he received a short treatment. He developed sores afterwards at different intervals. In January, 1903, he came under the treatment of a physician who gave him ten drops of a saturated solution of iodide of potassium three times a day, gradually increasing up to fifty-five drops, but the sores kept getting worse. There existed lesions scattered over the face and limbs, and a great number of white scars that looked like those following tertiary syphilis. The diagnosis was made by the exclusion of mycosis formigoides and of dermatitis coccidioides. The author gives a very good account of his researches, which established the fact that the patient had had syphilis, and the iodide eruption was possibly caused by a difference in the action of the kidneys. An interesting observation was made on the examination of a piece of tissue removed from a lesion on the forehead, many of the pores under the microscope looked exactly like epitheliomatous infiltration. There was the same appearance of connective tissue *loculi*, solidly filled with atypical epithelial cells. A number of photomicrographs are given to illustrate the text. The value of this article to the physician, to the surgeon, and to the dermatologist cannot be over-estimated, and we have no doubt that many a tuberculous iodide lesion has been removed for epithelioma, even after microscopic examination. As the author states: "On looking back over my own experience I believe I made this mistake once myself, and my only consolation is, that in operating on the lesion as an epithelioma, my fee was a great deal larger than if a correct diagnosis had been made."

The Knoll Prize in Bohemia.—The Philipp Knoll prize of 2,000 crowns was awarded for the first time, and not strictly in accordance with the ideas of the founder. It should be attributed to some one of the younger German-Bohemian scientists for the best work done in the last three years. Instead of that, it was divided among Professor Bayer and Dr. J. Langer, for work on congenital hernia and the lymph glands and bee poison, both dating from several years ago, and A. Fischel and O. Bail for recent research.—*J. A. M. A.*

MISCELLANEOUS NOTES.

Dermapurine [Medicated Soap].—Derma Remedy Co., St. Louis, Mo. Gentlemen:—I consider Dermapurine Medicated Toilet Soap the best soap in the market; it contains no free alkalies, is very mild and non-irritating, yet strongly antiseptic and very effective. It is very useful in allaying irritations of the skin in any inflammatory condition. I have prescribed it within the last year in preference to any other soap.

R. Y. HENRY, M. D.

Professor of Physical Diagnosis Missouri Homeopathic Medical College. Lecturer in Clinical Medicine, St. Louis City Hospital.

Listerine First and Foremost in the Field of Liquid Antiseptics.—An editorial foot-note from the December (1903) *Alkaloidal Clinic*: The ancestral foundation of all the liquid antiseptics before the medical profession is Listerine; happy in name, happy in formula, and happy in time of birth. It has been, is, and ever will be, first and foremost in this field. The Lambert Pharmacal Company is to be congratulated on its success.

Chionia in Hepatitis.—When the hepatic cells themselves become atrophic and lose their nerve tonicity, and refuse to respond to nature's mandate of secreting bile, then we have a group of symptoms not unlike those of a diabetic, but the results of which would be quite different.

In this condition we have found nothing that proves itself an ideal more than "chionanthus," and we have an ethical preparation, which you all know, that has proven itself a perfect God-send in this condition, and that product is "chionia." Before the hepatic cells become atrophic and hardened, there is a stage in which the liver becomes engorged, congested, hypertrophic, and in this condition we have hepatitis, an inflammation of the cells and connective tissue, and if this continue then the liver breaks down, atrophies and hardens. Now, chionia does not act like any other laxative or hepatic stimulant, but instead of producing a severe catharsis, it works on the inflamed cellular tissue, bringing back the liver to its former physiological condition, allaying all inflammation, and gently stimulating the hepatic cells to perform their duty. And when we add nux vomica to this ideal hepatic stimulant, we have a tonic for the sluggish liver that cannot be equalled by any other remedy.—*Extract from a paper entitled "Indigestion, an Etiological Factor in Diabetes," read before the Medical Association of South Carolina, by Dr. J. Will McCanless.*

Dermapurine in Eczema.—I have found Dermapurine the most excellent remedy for eczema that I have ever tried in a practice of twenty-five years.

G. W. HELMICK, M.D., Harrisburg, Ohio.

Muscular Soreness and Rheumatism Due to Grip.—In speaking of the treatment of articular rheumatism, Hobart A. Hare, M.D., Professor of Therapeutics in the Jefferson Medical College and editor of *The Therapeutic Gazette*, says: "Any substance possessing strong antipyretic power must be of value under such circumstances." He further notes that the analgesic power of the coal-tar products "must exert a powerful influence for good." The lowering of the fever, no doubt, quiets the system and removes the delirium which accompanies the hyperpyrexia, while freedom from pain saves an immense amount of wear, and places the patient in a better condition for recov-

ery. The researches of Guttman show conclusively that these products possess a direct anti-rheumatic influence, and among those remedies antikamnia stands pre-eminent as an analgesic and antipyretic. Hare, in the last edition of his *Practical Therapeutic* says: "Salol renders the intestinal canal antiseptic." This is much needed in the treatment of rheumatism. In short, the value of salol in rheumatic conditions is so well understood and appreciated that further comment is unnecessary. The statements of Professors Hare and Guttman are so well known and to the point and have been verified so often, that we are not surprised that the wide-awake manufacturers placed "Antikamnia and Salol Tablets" on the market. Each of these tablets contains two and one-half grains of antikamnia and two and one-half grains of salol. The proper proportion of the ingredients is evidenced by the popularity of the tablets in all rheumatic conditions and particularly in that condition of muscular soreness which accompanies and follows the grip. The Antikamnia Chemical Company, St. Louis, Mo., will send samples to physicians on application. Please mention this journal.

Pennsylvania Pronounces it Wholesome.—Recently a direct effort was made to frame legislative measures which would presumably exclude Vin Mariani from sale in the State of Pennsylvania. The State Board of Health promptly took up the problem. They employed two of the most prominent chemists of Philadelphia, namely, Professor Samuel P. Sadtler and Dr. F. A. Genth, who after critical analyses of Vin Mariani, made from purchases of their own selection, failed to find pure cocaine in demonstrable quantity. This not only refutes the absurd falsity of suspicion that any alkaloid is surreptitiously added to the wine, but confirms, in the most convincing manner the results of numerous former analyses made by the Governments of France, Germany, Russia, and also in the United States. Each of these analyses admits the absolute purity of Vin Mariani as a preparation of true coca leaves in a sound and nutritious French wine. As the Pennsylvania State Board of Health officially expresses it: "Vin Mariani is not a cocaine preparation, but a wine possessing the aromatic and desirable qualities of fresh coca leaves.—*The Coca Leaf*, November, 1903.

The Propriety of Bearing Testimony to True Merit.—In a practice of over fifteen years I do not think I have written over three or four testimonials for proprietary medicines, but I cannot see any impropriety in bearing testimony to a truly meritorious remedy, and especially where that remedy has stood the test of time with thousands of physicians who with one accord verify its curative virtues in a certain line of disorders. This is true of the preparation Sanmetto, which I consider a wonderful remedy and almost a specific in all inflammatory diseases of kidney and bladder. I prescribe it daily in my practice, and it has never yet disappointed me, but has frequently surprised me by its wonderful curative powers. When I am called to treat a case of cystitis my thoughts revert to Sanmetto; in fact, I have learned to associate Sanmetto with cystitis, and from the thousands of testimonials received, and the number of favorable reports in the medical journals, I hardly see why the manufacturers of Sanmetto desire more. It seems to me that a physician who does not know of the virtues of Sanmetto is very far behind the age.

Columbia, La.

W. P. HOUGH, M.D.

ST. LOUIS Medical and Surgical Journal.

Whole No. 761.

VOLUME LXXXVI.—MAY, 1904.—No. 5.

ORIGINAL COMMUNICATIONS.

SIX YEARS' EXPERIENCE WITH TUBERCULOSIS IN THE WEST.*

BY EARL S. BULLOCK, M.D., SILVER CITY, N. M.

It occurred to me that the best means at my disposal for demonstrating my appreciation of the honor of addressing you to-night would be to give a *resume*, as brief as possible, of my experience with tuberculosis out West, both as patient and physician.

During the past ten or fifteen years there has been such a flood of literature on tuberculosis that it requires a good deal of temerity to add to it, and if I did not have a sincere conviction that it yet remains a most fruitful source of investigation and that I have a little to add to the general fund of information on the subject, I fear I should lack the courage to do it.

Ever since I was myself sent West in search of health, six years ago, it has been my ambition to be able, at some future time, to lay before the profession certain facts and figures which may tend to prove or disprove the claims which have been made on behalf of climatic influences in phthisiotherapy. When a man gets well of such a serious disease as tuberculosis is likely to be, it is but human to wax enthusiastic over the conditions under which one has really or apparently recovered, and it is a fact that a large proportion of the writers in favor of climatic treatment have themselves obtained health in the far West. Thus, appreciating that the affirmative side of the question has and always will be well cared for, I have paid

*Read by invitation before the Philadelphia County Medical Society, Oct. 14, 1903.

more attention to its negative aspect, though always trying to bear in mind the sound reasons in favor of climatic phthisiotherapy. If, however, equally good results are to be obtained in so-called unfavorable climates we certainly wish to know it, that all the expense and discomforts which attend sending patients so far from home may be stopped. During the time I have studied tuberculosis in the West I have never lost sight of my original idea, and much of what I have to say to-night bears directly on this point, viz., the real value to the consumptive of the so-called favorable climate.

I have had personal experience in all the following health resorts, a good deal in some and little in others: Denver, Colorado Springs, Fort Collins and Pueblo in Colorado; Raton, Las Vegas, Santa Fé, Albuquerque, Deming, Fort Bayard, Las Cruces and Silver City, in New Mexico; Phoenix and Tucson, in Arizona, and El Paso, in Texas.

Resorts for consumptives all have much in common, though they may differ widely in details. Some, though few, are well-built towns and cities, though most, from an Eastern point of view, are miserable places of habitation. Everywhere is the ubiquitous consumptive spitting promiscuously, and the fact that there are so few cases of local infection speaks most forcibly for the truly wonderful healthfulness of the arid region. In few places is the consumptive really wanted. The doctors may desire his presence, but, as a rule, the people do not. It is a fact though, that money is potent with the health-seeker as with others, and when well supplied with it the invalid gets pretty much what he wishes. There are, of course, a number of excellent places open to invalids, but most of them are very expensive or receive patients so far advanced as to make them objectionable to the average health-seeker. What I particularly mean to imply is, that the invalid finds great difficulty in placing himself under anything like as good conditions as he would enjoy at home for an equal expense. As a rule, there seems to be but one compensation in having a consumptive about, and that is to get all possible out of him. It has often seemed to me that the consumptive is managed for the benefit of the people where he goes rather than in his own interest, though in justice I must say that there is hardly a county hospital in the West that does not have its quota of Eastern in-

valids, and I have never heard any objection, every one seeming to accept the burden of supporting the citizens of other States quite as a matter of course. A great many poor people go West for health's sake, and many of them become actual burdens to the communities to which they go. So, to take every possible advantage of the moneyed invalid may work out fairly in the long run, though it seems rather a hard practice to be gracefully accepted by the individual.

Everywhere is one impressed by the fact that the invalids are usually doing what they ought not to do. They are essentially idle folk and prone to follow the ways of the idle. They always find the centre of population, and, gathering together, support the adage that "like seeks like." Nothing can be more pathetic than to see the poor creatures sitting about the plazas, spitting and talking. To an observer picking his way carefully between expectorations, sometimes a difficult thing to do, and making the circuit of the square, the occupants of the crowded benches seldom or never show among them a happy, contented face. Standing about the hotels, watching the trains or the roulette wheel in the corner saloon, sometimes risking a little money themselves, or anything to break the dead monotony of their lives, they are always the same pathetic victims of the scourge of civilized States. Hunting, riding horseback or taking tiresome walks, they are seemingly constantly busy violating every principle laid down by the immortal Brehmer. One exclaims: Poor old climate, what a lot you are expected to do! Now and then, fortunately, may be seen a porch or tent fitted up for out-door life. Everything is comfortably and tastefully arranged. The invalid, occupying his cot or chair, is reading, maybe, and it is recognized at once that here is a properly managed case, and inquiry will elicit the fact that a careful physician in the East has sent the patient to some careful physician in the West. Such a patient is a very great contrast to those previously described. The daily life is purposeful and filled with little duties, from egg-nog to massage, all tending to make a useful citizen again. The patient may lie on his cot nearly all day, yet he is not idle. On the contrary, he is very busy getting well. A wistful, homesick, discontented expression will be absent in such a case. The fact remains that most people are sent West in

an utterly irresponsible way and, if they come under medical care at all, it is usually delayed until every chance of recovery is past. It seems so simple to send patients to some one who is known to be capable of managing them properly, that it is difficult or impossible to condone this careless way of shipping people to a strange land to shift for themselves under new conditions and surroundings. As in nearly every case a doctor has suggested the advisability of going West, the responsibility for this state of affairs rests squarely upon the shoulders of our profession.

One of the first lessons I drew from my experience was that most people who go West for their health are disappointed in the result, partly for reasons which I have endeavored to make clear, and partly because more is expected of the climate than it can possibly perform under any conditions. The majority of the tuberculous invalids that are observed have long since passed the point at which they would be favorable cases for admission to the large institutions in the East, and it does seem absurd that cases deemed hopeless at home should at once be regarded as hopeful because they have been sent West. I am, moreover, convinced that during recent years we have overestimated the curability of tuberculosis, even under the most favorable conditions in a favorable climate, and, furthermore, that there is a great tendency to underestimate the length of time required to effect a cure. During the first eight months of my own invalidism I was a model patient, and laid the foundation for a subsequent recovery, which, however, was not achieved until four years had passed, although mine was an insipient case of the best or afebrile type. I was thus impressed with the fact that to get well at all is a large contract to fill, and requires a much greater expenditure of time than is ordinarily allotted to it. Cases are so variable and the constitutional equation upon which so much depends is so little known that it is never more than guessing to put a time limit upon tuberculosis. I have several instances in mind in which patients were sent West five or ten years ago to get well in six months and they are still coughing. The Lord only knows how many are dead who were assured of an early and brilliant recovery!

An interesting class of patients observed is exemplified by

the person with ample means and the invalid habit. Though recovery has occurred, possibly years before, a certain delicacy of constitution and long-established custom have impelled a conviction that idleness is the only business compatible with living. With some this becomes a fixed idea which drives them South for the winter and North for the summer, *ad infinitum*. For my part I cannot understand what good it does to get well when it requires the energies of a lifetime to keep well. Then there is the invalid with the climate habit. He is always interested in the place in which he does not happen to be. I knew one poor chap, visiting thirty-seven towns in two years, who followed that *ignis fatuus*, the proper climate for his case. When failure is progressive and the end is near, it is indeed sad to see such as he race from town to town, each journey bringing him a little nearer the final stopping place. This too is often the fault of a doctor who lacks the courage frankly to advise a return home, and yet will hold out a false hope in order to rid himself of a dying patient.

During even a few years' experience one comes in touch with a number of old chronic cases in which hope of recovery has long since been abandoned. Yet many of the people thus doomed lead very useful lives, and unquestionably live longer in our beautiful climate under the more natural conditions thus possible than they would had they remained East. Once in a while a man will be observed who has recovered while roughing it. But where one gets well in this way many discover that it will not do, though often the knowledge costs more than can be paid. Fewer people than formerly have the idea that large quantities of whiskey must be consumed in order to make a recovery. There are still enough, however, to demonstrate the real character of this rather agreeable method of committing suicide.

Among the hundreds of pulmonary invalids who have crossed my path I have yet to notice in them any more pronounced irregularities of temperament than is natural in people who live on the edge of the grave. I have no patience whatever with those theories which ascribe to the consumptive a distinctive psychology, which by some writers has been carried to the absurd point of endowing these poor sufferers with criminal inclinations. There is no question, however, that character

and temperament influence the result, and some, though few, are not so constituted as to be able to do their share in the battle for health. I have found the majority of patients to be well adapted to invalidism which has a definite end in view, especially when fairly large numbers are gathered together, as in a sanatorium. The only exception I would make is the girl or young unmarried woman. Such are nearly always discontented, unsatisfactory patients, and I have concluded that they should be sent away from home only when accompanied by an older relative.

There are observed a great number of genuine cured patients who illustrate the best result of being sent West in search of health. Now, these constitute but a small proportion of the whole number who recover, most of whom return to their homes in the East. It is thus only fair to infer that there must be, after all, a large number of people who recover health in the high, dry climate of the West.

In few places visited is there any special provision for the care of consumptives. The houses were built for the well, not for the sick, and, as a rule, are inadequate even for them. It often requires a good deal of thought to place a patient advantageously. However, even under the most unsatisfactory conditions, there is no insurmountable obstacle when an intelligent will acts in behalf of the patient.

Under present conditions many people who go West become so discouraged by the difficulty of obtaining the necessities of life, or at least of surrounding themselves with anything like what they have been accustomed to at home for a price within their means, that they become disgusted and return East within a short time.

It has always impressed me as a great mistake to send invalids to places where the conditions are propitious only a part of the year, where a blistering summer or an arctic winter compels them to go North or South during those seasons, especially as there are so many towns in which the invalid may remain comfortably out-of-doors all during the year. I would not myself send a tuberculous invalid to a city in search of health. After all, and quite regardless of climate, a city environment must be inimical to a class of patients whose safety depends upon a return to more natural conditions of life, and

urban life is practically the same in New York or Denver. As a result of my study of western health resorts I am prepared to say there is in them very little appreciation of the principles of phthisiotherapy as they are applied East and abroad, especially as they are understood in the great sanatoria. There are, of course, many physicians thoroughly imbued with them and who practise them conscientiously, but only a small proportion of the health-seekers come under their direction.

During the summer of 1899 I received an appointment as pathologist to the recently established government sanatorium at Fort Bayard. This position seemed to offer great possibilities along the line of study so much desired, and it occurred to me that at last I would be in a position to discover for myself the true value of climatic phthisiotherapy. In this I was thoroughly disappointed, for reasons which I will endeavor to make plain. The one important deduction that resulted from two years' experience there was how tuberculous invalids ought not to be treated. During my time Fort Bayard was to all intents and purposes a prison. This, with the inferior character of the patients, the lack of the requisite moral and mental attributes, reduced the period patients were under observation to a little over four months—much too short a time in which to draw reliable data in tuberculosis. No attempt whatever was made to individualize the patient, upon which so much depends. They were treated *en masse*, practically by one man from the time the institution contained forty patients until the number passed two hundred. The patients occupied barracks that were out of date even for healthy soldiers. During the day they idled about, confined within certain imaginary lines, to go beyond which was very likely to entail several days in the guardhouse on a bread and milk diet. The general atmosphere of the place inspired restlessness and discontent. A discipline accepted without murmur by a man as a soldier became intolerable to him as a patient. As soon as he was discharged from the army, following upon a diagnosis of tuberculosis, being free, he promptly decamped for home. Failure to individualize and to deal with the patients upon a broad humanitarian basis, by driving favorable cases away, cost many a life I am sure, and inculcated a lesson by which I have tried to profit during my subsequent relations with tuber-

culous invalids. As a scientific project Fort Bayard labors under the tremendous disadvantage of a changing staff, the officers remaining usually but a short time. However, the sanatorium is yet in its infancy, and, like every government institution, develops slowly. I thoroughly believe that results will yet be accomplished of which we will all be proud, especially if a Reed or a Carrol happens to be ordered there for duty. The opportunity afforded by such a large supply of clinical material is sure to be utilized by some one sooner or later.

Following a suggestion of my own the cases at Fort Bayard were divided into three classes, as follows: (1) those exhibiting permanent afebrility, without tubercle bacilli in the sputum; (2) those exhibiting permanent or approximately permanent afebrility, with bacilli in the sputum; and (3) those exhibiting permanent febrility, with bacilli. In the first class, which included cases in which the ulcerative stage had not yet been reached, the diagnosis was confirmed by the tuberculin test whenever possible. In the second there was either pure ulcerative tuberculosis or minor degrees of mixed infection. The third included those in which there was mixed infection of high degree. This method of classification proved very satisfactory, and, with our present knowledge of the tuberculous and allied processes, is much more useful and scientific than the old way of dividing cases into the so-called stages, infiltration, consolidation and cavity; or incipient, advanced and far advanced. Some very excellent and hopeful cases may be present in all three of these stages. A case in which there is consolidation and cavity, but no mixed infection, will prove much more curable than one in which there is a small area of infiltration and a high degree of mixed infection. In the first instance the patient may reach old age, but in the second is almost sure to fill an early grave.

There were certain features common to all the cases at Fort Bayard which are worthy of note. The first and most striking was the apparant permanency of the different types, that is, cases in which the temperature did not drop below 100° shortly after admission remained permanently febrile. Cases afebrile upon admission, or those in which the temperature dropped below the febrile point shortly after admission, also exhibited marked permanency of type, as did those of the remaining

class, afebrile cases without bacilli in the sputum. It is thus clear that there is nothing definite about the course pursued by tuberculosis. The disease may end anywhere, either before or after the ulcerative stage is reached. Careful investigation into the family histories in all the cases proved the relatively insignificant rôle of a tuberculous family history as an etiological factor in the production of the disease. Much more important was a previous acute febrile disorder, which had been almost invariably present. In 51 per cent. of all cases at Fort Bayard a history of pulmonary hemorrhage was elicited, and yet this accident occurred in but 15 of 283 cases during treatment, showing conclusively not only that a high altitude does not predispose to the occurrence of hemorrhage, but really prevents it. Owing to the hygienic environment intercurrent diseases played a very minor part, and reinfections, diarrheas and night-sweats occurred so infrequently that they were not deemed worthy of special tabulation.

In regard to pulmonary hemorrhage, my observations at Fort Bayard, as well as subsequently, impressed upon me that this is an accident and not a part of the tuberculous process, and usually, though not always, bears a definite relation to blood pressure. Hemorrhage is much more likely to occur in cases in which the blood pressure is high than in those in which it is low. As these so-called hemorrhagic types are, from other causes, usually favorable, it has come to be an accepted principle in phthisiology that hemorrhagic cases are good cases, as though the occurrence of hemorrhage and a favorable outcome are related facts. In reality the relationship is accidental. I, myself, always dread hemorrhage, for, even if not immediately fatal, which, of course, it rarely is, it has indirectly, in my experience, been the apparent cause of a fatal termination in many cases otherwise brilliant.

Of the 153 patients who were discharged or died during the first two years at Bayard, 17 per cent. died, 33 per cent. were unimproved, 23 per cent. were improved, 16 per cent. were convalescent, and 11 per cent. were clinically cured, that is, free from all symptoms of tuberculosis, except perhaps the evidence of a former lesion demonstrable upon physical examination. These results compared so unfavorably with those obtained at the recognized eastern and foreign sanatoria, that, had I been

content to let my study of climatotherapy rest upon them, I should have taken the first east-bound train. But in justice to Bayard, especially during the first two years of its life, it must not be forgotten that a large proportion of the cases were hopelessly advanced, the patients' constitutions being wrecked by tropical diseases. Moreover, the time patients were under treatment was much too short to expect a cure, even in those who improved rapidly.

Twenty-two per cent. of the cases admitted during my term of service belonged to the most favorable class, that is, that in which the temperature is normal and in which bacilli are absent. The diagnosis in these cases was confirmed by the tuberculin test whenever possible. In all, the presence of adventitious organisms in the sputum was a marked feature. The usual organisms observed were: staphylococci, streptococci, leptothrix, buccalis, micrococcus, pneumoniae, crouposae, micrococcus tetragenus, and sarcinae. In this class of cases mixed infections was surely absent, and yet the bacterial causes of mixed infection were uniformly present. The explanation of this phenomenon which I favor is, that having very little sputum a greater effort is necessary to raise it, and so it becomes thoroughly mixed with secretions from the mouth and throat which carry the various organisms. In this class of patients the diazo reaction was never observed. In two cases the tuberculin test was negative on admission, and yet bacilli appeared in the sputum in a short time. Leukocytosis was absent, as were degenerative changes in the red cells. The lesion most frequently observed was a slight infiltration, though in a few cases there was a small area of consolidation. The results in this class were 40 per cent. clinically cured, 43 per cent. improved, 17 per cent. unimproved, and none died. The average daily maximum temperature being 98.9° F., it is perfectly clear that tuberculosis previous to the ulcerative stage is an afebrile affection. As might be inferred, in none of this class did hemorrhage occur. These cases are examples of the most favorable type of tuberculous invalids, and for this reason researches in climatotherapy cannot fairly be based upon the results,

Fifty-nine cases belonged to the class in which, though the temperature is normal or but slightly elevated, bacilli are

present in the sputum. They are either cases of pure ulcerative tuberculosis or of minor degrees of mixed infection. In these, when fever occurs, it is always amenable to rest treatment. Secondary anemia was present in about half of this class, and in nearly all it ceased to be a factor within a short time. Leukocytosis was present in about half and, like the anemia, usually disappeared. In only a few were there degenerative changes in the red cells. Adventitious organisms were present in the sputum in but 6 per cent. The average temperature was 99.5° F. The diazo reaction was uniformly absent. None of this class died. Twenty-nine per cent. were discharged unimproved; 48 per cent. improved; 16 per cent. were convalescent, that is, without bacilli; and 7 per cent. were able to pass the tuberculin test. In this class the usual lesions were both infiltration and consolidation, and in a small proportion there were cavities. This is the type in which the results of climato-therapy may be employed fairly for purposes of comparison with treatment in unfavorable climates. If, under equally good conditions, the results are better than can be obtained East, then the question of climato-therapy in tuberculosis is settled, and it is right to send these people West. However, comparison is not as easy as it seems, for at most of the large institutions in the East none but incipient cases are admitted, and in discharging patients the ambiguous term "arrest" is employed, and that little word may cover a multitude of bacilli.

During my service at Fort Bayard forty-eight cases were discharged or died in which permanent febrility was present. In this class the average temperature was 101.5° F. In nine there was a complicating laryngeal lesion. All presented secondary anemia, and in all there was leukocytosis. There were degenerative blood changes in almost half. In but fourteen were adventitious organisms present in the sputum, showing conclusively that the presence of these organisms, though confirmative, is not sufficient upon which to rest diagnosis of mixed infection. In about half the diazo reaction was present. Nearly all presented the signs of advanced pulmonary disease, there being cavities in thirty-eight of forty-eight cases. Fifty per cent. died, 42 per cent. were discharged unimproved, and 8 per cent. were slightly improved. None were cured. With

a death-rate of 50 per cent. and a hopeless prognosis in the remainder, the futility of sending permanently febrile cases West ought to be clear to all of us.

While at Fort Bayard I was placed in possession of conclusive evidence that the tuberculin test is not a justifiable procedure in human beings, and also that it cannot be depended upon as completely demonstrating the presence or absence of a tuberculous process.

Next, in chronological order, comes my experience at St. Joseph's Sanatorium, Silver City, New Mexico, where I have been the medical director since its establishment two years ago. The reasons for its location at Silver City were the same as those operative in selecting a site for the government institution at Fort Bayard, viz., a climate which permitted comfortable out-door life during all the year. I would like to take this opportunity to correct some mistaken ideas in regard to the climate of the Southwest. In almost all places in Arizona or New Mexico having an altitude of from five to seven thousand feet, the climatic conditions are much the same. It is colder in winter than is usually thought, the thermometer reaching the freezing point almost every night during December, January and February, while the bright, clear, winter days are sufficiently warm to permit patients to remain out-of-doors with but little bundling or other inconvenience. The summers, too, are cooler than is popularly supposed, and are, in fact, ideal. If Silver City, climate and all, could be transported East, it would shortly become the most famous of summer resorts. With but thirteen inches annual rainfall, the so-called rainy season affects the prevailing dryness but little. In regard to the relations of the different seasons to phthisiotherapy, I can say with conviction that the fall, winter and spring months are most favorable to the tuberculous invalid. Patients who have done well during the previous winter usually continue their progress during the summer, and, on the contrary, those who have failed during the winter, will, as a rule, go all to pieces during the summer. As for newcomers, the contrast with their home climate is so great at any time of the year that they apparently do about as well in the summer, though they gain weight more rapidly as the cool weather begins.

In describing the scheme of organizing St. Joseph's I would first like to pay a deserved tribute to the president of the advisory board, Dr. H. M. King, the present medical director of the Loomis Sanatorium, who made the long trip across the continent for no other purpose than to assist at the birth of a new institution for the tuberculous. The institution also owes a great debt to the Sisters of Mercy for their devoted service. In the face of every obstacle, and our discouragements have been many, they have been unswerving in their loyalty to the institution. The effort has been made to safe-guard every professional and scientific ideal, and, with this in mind, the medical administration was placed in the hands of an advisory board composed of men who have proved their interest and accomplishment in the field of tuberculosis. The medical director is a representative of this board, and may be removed and replaced at the pleasure of its members. A unique feature of our work is the practice of sending monthly reports to the home physician. This permits him to follow the patient from month to month, and not lose the case scientifically, as is usual in sending patients away from home.

The buildings conform to the old mission type, and are placed around a central court. They consist of an infirmary for febrile cases, a building for ambulant patients, a dining-room and kitchen in a separate structure, a laboratory, etc. Every room occupied by patients is so constructed that the air is fully as pure indoors as out, at all times of the year. This has been accomplished by having each room open on porches on both sides, thus doing away with inside halls. Recently, as a temporary expedient, a few tent cottages have been employed, but their lack of durability makes them undesirable when properly constructed buildings may as well be had. The laboratory, on account of deficiency of means, is as yet quite incomplete. It is our purpose that St. Joseph's shall include a second or daughter institution, where poor patients can be properly cared for at a nominal expense, though so far it has been impossible to take even the first steps toward the accomplishment of this part of our plan. Likewise we want cottages for the accommodation of patients accompanied by their families. As far as practicable and consistent with humanitarian principles, hopeless cases have been excluded from St. Joseph's. Never, how-

ever, has any one been turned from the door. Right here seems a propitious moment for registering my protest against the practice of some institutions of admitting only favorable cases, as though record-making were the only object of medical science, and it seems to me that every institution should be open to every one with a fighting chance for life. The management of St. Joseph's is very grateful for even the advanced and hopeless cases who have come to us, for without them we would have been obliged to close our doors. The institution has been fortunate in that it has never been necessary to turn any one away because he was without means, though, of course, as St. Joseph's is entirely self-supporting, we would be obliged to do so if there were many applications from indigent individuals.

The principles of treatment are those common to all modern institutions of the same character, and consist of out-door life, rest, and nitrogenous feeding. Without going into details of therapy, I would like to say, in this connection, that I have found the fluid extract of *cocillana* the prince of expectorants in cases in which such a drug is required. I know that it is very little employed, and so feel it a duty to mention my experience with it. Calcium chloride, a very potent weapon in pulmonary hemorrhage, I consider worthy of special mention. Without having any influence over the hemorrhage at the time, it is almost certain to prevent its recurrence. In regard to the treatment of a laryngeal lesion, I may say frankly that to all intents and purposes it is palliative only, and much more depends upon the constitution of the patient than upon any treatment employed.

In the following report of the first two years' work at St. Joseph's Sanitorium, mention is made only of those cases in which the patients have died or been discharged. Patients still under treatment are not considered. In the summary of results achieved at St. Joseph's the details of cases have not been tabulated, for, in general, the observations made at Fort Bayard have been substantiated by the experience at St. Joseph's.

Excluding those cases in which the diagnosis was imperfect, and those in which treatment was continued less than one month, there are forty-nine cases to be considered, which are divided into two classes, febrile and afebrile.

There were twelve febrile cases and thirty-seven afebrile.

Of the febrile cases none were cured, 25 per cent. died, 58 per cent. were discharged unimproved, and 17 per cent. were discharged improved, though in them the ultimate outlook was not favorable. These results are very similar to those obtained at Fort Bayard in the same class.

Of the afebrile cases none died, 19 per cent. were discharged unimproved, 46 per cent. were improved, and in most of them a cure was potentially possible had they remained under treatment long enough. Thirty-five per cent. were clinically cured.

Taking both classes together the results were: 6 per cent. died, 28 per cent. were unimproved, 38 per cent. were improved and 28 per cent. were cured. The forty-nine patients considered were under treatment an average of six and one-half months, though, of course, in the favorable cases the patients remained much longer—nine to twelve months, as a rule.

I thoroughly appreciate that our cases have not been numerous, and my contribution toward settling the final word on the value of climatotherapy in tuberculosis is not what I hope it some day may be. In view, however, of my experience and observations, I venture to give for what they may be worth my convictions in the matter under discussion:

1. We are not justified in sending patients with a high grade of mixed infection away from home, certainly not across the continent. Moreover, it is little short of criminal to ship a patient, even of the most favorable class, into the West, either to shift for himself under conditions that may prove inimical to his moral as well as his physical welfare, or to bring poverty upon those near him.

2. A climate in which the invalid may remain comfortably out-of-doors all the year through; in which dryness of the air prevents colds and cures a catarrhal disposition; in which the natural healthfulness prohibits intercurrent diseases, and in which the altitude checks or inhibits the hemorrhagic tendency—such a climate certainly presents for selected cases, with little or no mixed infection, the most favorable environment to be found on the face of the globe.

CONDITION OF THE BLOOD IN PATIENTS SUFFERING FROM PULMONARY TUBERCULOSIS.*

BY JOHN M. SWAN, M.D., PHILADELPHIA, PA.

The study of the condition of the blood in the patients suffering from pulmonary tuberculosis who furnished the material for this paper was made possible by the kindness of Dr. Julius L. Salinger, who placed his tuberculosis ward in the Philadelphia Hospital at my disposal. The paper is based on the counting of the erythrocytes, the counting of the leukocytes, the estimation of the hemoglobin, the differential count of the leukocytes, and the search for the iodine reaction of the leukocytes in twenty-five cases of pulmonary tuberculosis and one case of extensive cavity formation in the lung due to bronchiectasis.

In studying the results of these blood counts I shall adopt the classification of Grawitz,⁴ who divides the disease into three stages: a first stage, in which there is a beginning affection of the apex, without cavity formation; a second stage, in which there are symptoms of cavity formation with slight fever or without fever; and a third stage, in which hectic fever is present.

FIRST STAGE. There is one patient who represents the first stage of consolidation of the apex, without cavity formation. This patient showed a slight reduction of the erythrocytes to 3,980,000; a normal number of leukocytes, 10,000; and a moderate reduction of hemoglobin to 70 per cent. This patient improved very much under treatment and was finally discharged without symptoms and with few physical signs. As his general condition improved there was a corresponding improvement in the blood picture; the erythrocytes rose to 4,580,000 and the hemoglobin increased to 82 per cent. With the improvement of the blood condition the leukocytes rose to 16,600.

An examination of the differential leukocyte count of this patient shows that the relative proportion of the different cells was not changed. The treatment, under which the patient greatly improved, apparently caused an increase in the eosinophiles from 1.6 per cent. to 3 per cent.

*Read before the Philadelphia County Medical Society, Jan. 13, 1904.

SECOND STAGE. There are eight patients representing the second stage of the disease: the stage of cavity formation without fever or with but a slight febrile reaction.

Among these patients, the erythrocytes were usually normal in number; in four instances they were present in greater numbers than 5,000,000 to the cubic millimeter; and in one instance they numbered only 3,680,000. The range of the erythrocyte count was from 6,710,000 in a negro who had complained of cough for eight years, to 3,680,000, also in a negro, who had been ill for two and one-half months and who had albuminuria.

Seven of these patients showed a leukocytosis varying from 34,000 to 11,120 and one showed a leukopenia of 7,100. The latter patient had carried a cavity in his right lung for a number of years and the disease was stationary.

In these patients the differential counts showed, as a rule, a percentage of polymorphonuclear cells above 80, the highest being 93.4. In 3 cases the polymorphonuclears formed 70.4 per cent., 73.6 per cent. and 78.8 per cent. of the leukocytes respectively. In one patient the first examination was made during an asthmatic paroxysm and showed 80.8 per cent. of polymorphonuclear cells. A second examination was made about four weeks later, after the asthmatic paroxysms had ceased, and gave 78 per cent. of polymorphonuclear cells. Eosinophile cells were present in all of these patients except two, in proportions varying from 3 per cent. to 0.2 per cent. The two patients from whose blood these cells were absent left the hospital before a second examination could be made and their ultimate fate is unknown.

The hemoglobin varied from 90 per cent. to 63 per cent., although all patients showed some pallor of the skin and the mucous membranes. Indeed, in some instances, the percentage of hemoglobin was at first thought to have been erroneously estimated until more than one trial showed the reading to be accurate.

THIRD STAGE. There are fifteen patients who may be placed in the third stage of the disease, that of hectic fever. In these patients the erythrocytes were usually reduced in number, although a normal number of these cells was occasionally found. The counts ranged from 5,710,000 to 2,890,-

000, with an average of about 4,019,130. The highest count was obtained from a patient who was rapidly improving under treatment; indeed, he might be placed in the second stage of the disease, but for the fact that a former count was made while he was having marked hectic fever.

The leukocytes were usually increased in number, giving a leukocytosis of from 247,000, in a very rapidly progressing case, to 10,080. Five patients gave a leukocyte count below 10,000: 8,480, 7,600, 7,600 to 9,600 and 6,733 respectively.

The polymorphonuclear cells were usually above 80 per cent., varying from 97.6 per cent. to 80 per cent. In five instances these cells formed less than 80 per cent. of the entire number of the leukocytes, varying from 78.8 per cent. to 69 per cent.

The eosinophile cells were usually absent from the blood of those cases that proved fatal.

The hemoglobin varied from 95 per cent. in a patient who was improving on treatment, to 35 per cent. A rise in the hemoglobin percentage was usually noted just before death and was attributed to the sluggishness of the peripheral circulation as the end approached.

In the case of a patient who failed rapidly and who died about forty-three days after admission, the erythrocytes numbered 3,800,000, 3,820,000, 3,020,000, and the day before death 4,600,000. In this patient the leukocytes were always below 10,000: 7,600, 7,000, 6,300, rising the day before death to 9,600. The hemoglobin varied from 50 per cent., 55 per cent. to 85 per cent. the day before death. The percentage of polymorphonuclear cells was 77.2 per cent., 80 per cent., 78.8 per cent. and 80 per cent. respectively. When the blood was first counted there were 0.4 per cent. of eosinophiles, but twenty-four days later these elements had disappeared and were not again found in the peripheral blood.

COMPLICATIONS. The series of cases comprising this study contains two cases of pulmonary hemorrhage, six cases of albuminuria, two cases of tuberculous diarrhea, five cases of pleurisy and one case of asthma.

HEMORRHAGE. One patient had been spitting blood for two weeks and had had two distinct hemorrhages, the last one a few days before the blood examination was made. The hemoglobin suffered a marked reduction (55 per cent.): the

erythrocytes numbered 5,220,000; there was no leukocytosis (8,480). There was no nucleated erythrocytes and the differential count showed nothing abnormal.

The second patient had two hemorrhages on May 25. On May 28 his hemoglobin was 55 per cent., there was a leukocytosis of 15,800, but the erythrocytes numbered 4,380,000. The lymphocytes were reduced to 7 per cent., and there were 14.4 per cent. of transitional forms. The man had a third hemorrhage on May 30, and two days later the erythrocytes numbered 3,430,000; there was a leukocytosis of 20,700, and the hemoglobin was reduced to 55 per cent. There were no nucleated erythrocytes.

ALBUMINURIA. Albuminuria seems to have little if any influence on the blood picture. Of the six cases in which this complication was noted the erythrocytes varied from 6,710,000 to 2,890,000. The leukocytes varied from 24,240 to 7,600. The hemoglobin varied from 37 per cent. to 90 per cent. The polymorphonuclear cells formed more than 80 per cent. of the total number of leukocytes except in two instances. Eosinophile cells were absent from the peripheral blood in all except two instances.

TUBERCULOUS DIARRHEA. Two patients suffered from tuberculous diarrhea. In both of these patients the erythrocytes were reduced and the leukocytes were increased in number; the hemoglobin was markedly reduced and the polymorphonuclear cells formed more than 80 per cent. of the total number of leukocytes.

PLEURISY. Of the five cases of pleurisy the most constant feature of the blood examination was the leukocytosis. One patient did not show the reaction, his leukocytes numbering only 8,100. In the others the leukocytes varied from 10,600 to 34,000. The polymorphonuclear cells constituted the bulk of the leukocytes in these cases.

Case No. 24 presented nontuberculous cavities in the posterior portions of both lungs. This patient's blood count showed 4,750,000 erythrocytes; 15,400 leukocytes; hemoglobin, 70 per cent. The polymorphonuclear cells formed 81.2 per cent. of the leukocytes, and there were 1.8 per cent. eosinophiles.

IODIPHILIA. I did not succeed in demonstrating the iodine reaction in any of my specimens. Locke² has found this reaction absent in uncomplicated tuberculosis; but Da Costa⁶ has found it present in septic cases.

EOSINOPHILIA. As the study progressed, my attention was attracted by the fact that eosinophile cells were not to be found in many of the specimens, and it soon became apparent that the cases in which these cells were absent were fatal ones. There are five exceptions to this, however. Case 9 at the time of the examination showed 0.4 per cent. of eosinophiles, and he is known to have died, although how long after the examination I am unable to say. Case 12 showed 0.8 per cent. of eosinophiles four weeks before death; but when a second examination was made, two weeks before death, no eosinophile cells were present. Case 17 showed 0.4 per cent. of eosinophiles forty-two days before death, but examinations made seventeen, six and one day before death showed absence of eosinophiles. Case 24 showed 1.8 per cent. eosinophile cells, and the patient died after a surgical operation for the drainage of a nontuberculous pulmonary cavity.

Cases 6, 7 and 10 showed absence of eosinophiles when the blood was examined, but these patients left the hospital, and their fate is unknown.

Cases 25 and 26 were under treatment which apparently produced much improvement in the physical condition of the patients. In these patients the eosinophiles increased as improvement progressed; in 25 rising from 0.2 per cent. on the first examination to 1.6 per cent. on the second; in 26 rising from 1.6 per cent. to 3 per cent.

I am inclined to believe that the presence or absence of eosinophiles in the peripheral blood of tuberculous patients is a sign of some prognostic significance. Levaditi¹ makes the following statement: "Tuberculin, among the bacterial products, appears to have eosinophilous properties. Jurgens has already shown, in tuberculous patients who succumbed in the course of treatment with tuberculin, an increase of the number of white cells of the blood. Tschistowitch, Grawitz, Bischoff, and Botkin examined the blood during life and discovered quantities of eosinophiles much above normal. This oxyphilia appeared also, according to the more recent statements of

Bettman, in the course of the treatment of tuberculosis with tuberculin and with cinnamic acid." Zappert¹⁵ also found an increase of eosinophile cells after injections of tuberculin; but in four out of eight cases of pulmonary tuberculosis these cells were reduced in number and in another of the eight cases they were absent. There is no note concerning the ultimate fate of these five patients.

Claude and Aly-Zaky³ say that treatment of experimental tuberculosis in guinea-pigs produced changes in the blood formula as seen in control animals. In those animals in which treatment resulted in deferring the fatal termination, the eosinophiles were found increased, even as high as 12 per cent. in some cases, particularly in the period of initial reaction to the infection.

Cabot⁵ says that in most cases associated with leukocytosis eosinophiles are absent. They may be increased in cases with cavities in which possibly the individual inoculates himself with tuberculin manufactured in the cavities of his own lungs.

Brown⁸ quotes Teichmüller's statement that an increase of the eosinophiles in the blood and in the sputum of tuberculous patients is a favorable prognostic sign. Brown, himself, agrees with the observation of Teichmüller that the percentage of absolute number of eosinophile cells present is of real value in the prognosis of tuberculosis. Teichmüller's work¹⁴ was done on sputum, which he stained by various methods, principally by eosin and methyl blue. He believes that in bad cases eosinophile cells are usually absent from the sputum, although an isolated cell may be found occasionally. He considers the study of the eosinophile cells in sputum an indispensable aid. It gives a method of estimating the resisting power of the patient, of determining the prognosis and of critically estimating the value of special therapy.

Ehrlich and Lazarus⁹ account for the occurrence of a polymorphonuclear leukocytosis by the chemotactic influence of certain bacterial products. The neutrophile cells are the ones ordinarily drawn from their storehouse in the bone-marrow by this chemotactic influence of substances circulating in the blood stream.

The majority of the bacterial products is positively chemotactic for the neutrophile cells; while only a few substances,

among which tuberculin is included, according to the observations of the authors just quoted, are positively chemotactic for the eosinophile cells. The variation of the eosinophile cells in the circulating blood of tuberculous patients may be explained as follows: In cases of incipient tuberculosis eosinophile cells are present in the blood stream in about normal proportion, because there is not enough tuberculin manufactured in the lesions to produce a marked eosinophilia. When, however, the secondary infection with the organisms of supuration occurs, the neutrophile cells are attracted by the chemotactic power of the products of their growth which circulate in the blood, and the eosinophile cells are repelled, so that we find an excess of polymorphonuclear neutrophile cells in the peripheral blood. As the patient gradually becomes more saturated with the latter poisons and the fatal termination approaches, the eosinophiles progressively diminish in number and disappear from the peripheral blood. If, however, the progress of the case is influenced favorably by treatment, the symptoms of the secondary infection disappear and the chemotactic influence of the products of the pyogenic organisms is withdrawn, so that the tuberculin being produced in the lesions may exercise its chemotactic influence to attract the eosinophilous polymorphonuclear cells from the bone-marrow into the blood stream.

CONCLUSION. 1. The blood picture in pulmonary tuberculosis is not constant and the conditions described by Grawitz⁴ are by no means absolute. There are cases in each of the three stages of the disease that are quite out of the limits of cellular and hemoglobin contents described by him.

2. Omitting the exceptional cases from consideration, however, the average case in the first stage of the disease presents a slightly reduced number of erythrocytes, a moderate reduction of the hemoglobin and about a normal number of leukocytes. The average case in the second stage presents a varying degree of leukocytosis, due to an increase in the number of polymorphonuclear neutrophile cells. The erythrocytes are present in about normal numbers, and the hemoglobin is often normal percentage. The average case in the third stage will show a reduction in the number of erythrocytes, a moderate leukocytosis, composed of the polymorphonuclear neutrophile cells, and a high hemoglobin percentage.

3. Hemorrhage is usually followed by a marked reduction in hemoglobin and a slight reduction in the number of erythrocytes. Leukocytosis is not an invariable feature of a posthemorrhagic blood.

4. Albuminuria, of itself, appears to cause no constant change in the blood picture.

5. Tuberculous diarrhea is apparently attended by a reduction of the number of the erythrocytes and of the percentage of the hemoglobin and by an increase of the leukocytes. The latter increase is due to the polymorphonuclear neutrophile cells.

6. Pleurisy is usually accompanied by a polymorphonuclear neutrophile leukocytosis.

7. There is no distinctive blood picture that will serve to differentiate between extensive cavity formation due to tuberculous degeneration and that due to other causes.

8. The leukocytosis occurring in the course of pulmonary tuberculosis is due to an increase of polymorphonuclear elements and not to an increase of the lymphocytes or of the transitional cells.

9. The absence of the eosinophile cells from the blood may be looked upon as an unfavorable prognostic sign. The increase of these cells while the patient is under treatment may be taken as an indication that the progress of the disease has a tendency to become arrested.

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THE SERUM TREATMENT OF HAY FEVER.*

BY LEWIS S. SOMERS, M.D., PHILADELPHIA, PA.

With our lack of knowledge of the basis of hay fever or of definite pathological changes in intimate connection with the disease, one of necessity can hardly expect any single application of whatever nature, to permanently prevent the recurrence of succeeding attacks, and this is especially so when the symptom-complex results from the correlation of various active and predisposing factors. From a general etiological standpoint, one can roughly group the cases of this affection into three classes; those in which a neurotic element apparently predominates; those in which a general systemic condition, such as lithemia, predominates; and those in which the outburst of hay fever is closely associated with the presence of pollen in the atmosphere. This grouping, however defective, has some definite value in classing the cases as regards treatment, and as the application of serum as a therapeutic measure theoretically seems to give the most promising results in the latter class; it is these that form the larger proportion in whom this treatment is applied.

As the result of Dunbar's experiments, he has been led to believe that the specific causal agent of hay fever resides in the pollen of certain grains which produce the disease in the predisposed, but has no effect whatever upon other individuals. The toxin obtained from the pollen grains which is capable of producing hay fever seems to be an albuminoid body found in the starch particles of the pollen granules. It is obtained from a variety of grasses and cereals, such as corn, wheat, oats, rye and maize, and also from golden rod, rag-weed and hog-weed. It is soluble in blood serum, the secretions of the respiratory tract and in salt solution. Undoubtedly, from the studies that have been carried out, the poison is identical as obtained from the various sources mentioned, as it was found that hay fever artificially produced by the pollen toxin of corn was neutralized by the antitoxin obtained from rye, and, as bearing out the probable identity of the toxin from the various plants, it was found that the hay fever was produced irrespective of the source from which the toxin was derived.

*Read before the Philadelphia County Medical Society, Dec. 23, 1903.

The effect of this toxin on a susceptible person seems to be immediately followed by the development of hay fever, the peculiar symptom-complex taking place as completely in winter as at any other season. Dunbar inoculated eight individuals in January by instilling into one eye a few drops of an aqueous suspension of corn pollen, and in every case both the objective and the subjective symptoms of hay fever were produced in varying intensity; at the same time eleven control subjects received the same instillations, but without the production of the slightest reaction. Semon corroborated this, and states that there can be no doubt that when the toxin is used in susceptible individuals it produces the characteristic symptoms of hay fever, and that this artificial hay fever is as variable in intensity as are the attacks of the naturally acquired disease, both as regards its local and constitutional symptoms. As to what constitutes the nature of this susceptibility or special predisposition to both artificial and acquired hay fever, seems to be entirely obscure; and why the toxin produces a violent attack of hay fever in one individual and yet in another will have absolutely no effect, remains unsolved. In the susceptible, however, the symptoms were produced whether the toxin was applied to the eyes or the nasal chambers, or even injected subcutaneously; by this latter method the disease has been reproduced by the injection of a minute amount, with the development of conjunctivitis, coryza, cough and asthmatic symptoms.

As a result of the apparent specific character of the toxin, Dunbar, by working along the lines of immunization and injecting increasing doses of pollen toxin into animals for prolonged periods of time, was able to obtain the development of an antibody in the blood of the animal. This antitoxin was capable of neutralizing the toxin and immediately subdued the hay fever symptoms, with a retrogression of the objective changes produced by the toxin. This was shown by Mayer, who, in a group of cases with hay fever developing in May, June and July, found the antitoxin effective. He used a control test of another individual not susceptible to hay fever in connection with each susceptible case, and each received the same treatment, which consisted in placing in one eye one drop of equal parts of normal horse serum and pollen toxin, while he

dropped in the other eye one minim of equal parts of antitoxin and pollen toxin. When the reaction occurred in the first eye there was redness, burning, itching and some slight edema, while the eye containing the latter mixture remained normal. The symptoms rapidly made their appearance, and when the itching became severe it was immediately arrested by the application of one drop of antitoxin, while in all the control cases but one no reaction took place.

The antitoxin protects susceptible subjects against the effects of a similar toxin, and this influence is exerted not only in the test tube, but also takes place when the antibody is used in the eyes or the nose of an individual after the pollen toxin has been used. Dunbar has demonstrated this by eye inoculations of hay fever patients with a mixture of the toxin and antitoxin, with the appearance of slight itching and congestion, but in half an hour all the symptoms had vanished. In another test, one drop of toxin was placed in the eye, and as soon as the conjunctiva had become congested, and there was some smarting, four drops of antitoxin were instilled in the course of twenty minutes, with the complete neutralization of the toxin and the subsidence of the irritation. The same results were obtained when the nasal chambers were used for the experiment and the disappearance of the irritation under the influence of the antibody was shown here even in a more striking manner than in the eye. It has also been found that the action of an antitoxin on a different toxin is the same as obtained when both bodies are derived from the same source; thus the irritation produced by the pollen of golden rod was rapidly cured by an antibody derived from the various grasses, etc.

The serum antitoxin is, for practical use, applied by dropping one or two minims into each eye and nasal chamber whenever an attack of hay fever is expected, or on the presence of any irritation, and the applications are repeated as may be required. The dried serum may also be used when mixed with an inert powder such as milk sugar, but it can only be used in the nasal chambers; and when applied there, a few grains are drawn into each nostril and repeated as necessary. When the patient is seen some weeks in advance of the expected attack, his general condition must be made as nearly normal as possible; all sources of local irritation of the upper respiratory tract removed

if such can be done, and the antitoxin may be applied to the nasal chambers once or twice daily, in order to avoid the onset of the attack. While the serum quickly neutralizes the effects produced by the toxin, yet in the small number of cases of hay fever reported it is impossible to state whether it will arrest all the symptoms when the affection has once made its appearance, or whether the results obtained will be lasting. It is also at present impossible to determine the results obtained by its prophylactic administration in advance of the expected attack; that is, whether it will prevent the actual appearance of the disease, delay its appearance or simply mitigate the intensity of the symptoms. The experience of Semon in this respect is important; as in eight cases of hay fever it seemed a palliative rather than a directly curative measure; and while it gave relief to some, it acted beneficially in postponing the attack in others. He finds it produces immediate disappearance of the subjective and within a few minutes great amelioration of the objective symptoms, and its effects, in some instances, appear to be sufficient to prevent a reappearance of the subjective symptoms, while in other cases repeated use of the serum was required to obtain a return to the normal conditions.

My experience with the serum in hay fever embraces ten cases, the disease being well developed in all when they were first seen; and both on this account and the severity of the attack, they were peculiarly suitable to test the value of the serum, as any results from its administration could be readily ascertained. I used the antitoxin made from the serum of animals inoculated with the pollen toxin of golden rod, and employed it both in the form of the serum and as a powder.

CASE 1.—Male, aged 25 years. Hay fever for 9 years. The attack came on August 16, and he received the antitoxin on the 29th. A drop was instilled into each eye and 2 drops into each nasal chamber with immediate relief. Gradually the congestion disappeared, the nasal mucosa resumed less of a "water-logged" appearance, and within $\frac{1}{2}$ hour no objective or subjective symptoms remained. The effects of the antitoxin lasted for about 12 hours and then the itching, sneezing, lachrymation, etc., reappeared as before. He was given the antitoxin to use whenever symptoms of irritation manifested themselves, and after instilling the serum into eyes and nose once or twice daily for 10 days the affection disappeared entirely.

CASE 2.—Male, aged 22 years, with hay fever of 4 years' standing, with its onset about the middle of August; presented the same result as the former patient.

CASE 3.—A boy, aged 19 years, with hay fever of 3 years' duration, appeared the same time as the other cases, received the serum in the same way, with complete relief from 5 to 6 hours at a time, when it was again necessary to reapply it. It was necessary, however, to use the serum well into October, when the disease disappeared as usual.

CASE 4.—B. S., male, aged 43 years. Uses tobacco and alcohol to excess. This is the fourth year of his hay fever, which commenced the first week in August. He was seen September 8, when he presented aggravated symptoms of the affection, with wheezing in the chest, but which had not developed into marked asthma. He stated that he kept his nose clear with a 4 per cent. cocaine solution. The serum produced instant relief of the eye symptoms, but when applied in powder form to the nasal chambers, produced marked irritation and repeated sneezing attacks. On this account it had to be omitted, and after two weeks' use of the serum, when applied locally two or three times daily, the eye symptoms entirely disappeared, the sneezing and nasal discharge subsided only in mild attacks and the nasal mucous membrane remained unchanged. While using the serum he was only a little more relieved than during the previous year, but in the end of the period alcohol was discontinued, and the hay fever subsided in accordance with them.

CASE 5.—J. S., male, aged 35 years. Hay fever for 7 years, with its onset about the middle of August. He presented marked two sided nasal obstruction, with sneezing and had in previous years used cocaine solution. The serum was applied in the usual manner, and the symptoms, after the first application, were entirely relieved, and was continued for two weeks, when it was discontinued, and produced entire relief of the symptoms, which were not repeated during September.

CASE 6.—J. S., male, aged 35 years. Duration of hay fever 10 years, with its onset about the middle of August. The serum was used freely during the first week in September, and the symptoms were entirely relieved, and were not repeated during the month.

CASES 7 and 8.—Females, aged 26 and 30 years, respectively. Both had hay fever for 3 years, and in both the attack was inaugurated the last week in August. They were seen one week after the onset, and the dried serum was used in the nasal chambers, 5 to 6 times daily for one week. Except for slight reduction of nasal irritability, no effects of any real benefit were obtained; so this was discontinued and the serum was used, with the result in both instances, that one application in the morning, or when exposed to bright sunlight, would give them entire relief.

CASE 9.—A. M., male, aged 35 years. Has hay fever, with hay asthma to such an extent that it is impossible for him to sleep more than 2 or 3 hours, and then only in a sitting posture. The disease comes on about the 18th of August and has recurred for 10 years. He was seen on September 6 when, on account of the severity of the symptoms, he had temporarily given up his occupation as a clerk. On account of my supply of serum running out, he was given the dried antitoxin to use in the nose, and 2 days later he stated that the powder had reduced the irritation to some extent and had greatly diminished the sneezing attacks, but that it had no apparent effect upon the amount of secretion, nor upon the nasal obstruction. The other symptoms, including the asthma, remained unchanged. He was then given a drop of serum in each eye and nasal chamber, with almost immediate relief of the nose and eye symptoms. This was followed by its application several times daily, and after 24 hours the asthma had so diminished in intensity that he was able to sleep in a natural position for 5 or 6 hours and, in the course of a week, the asthma had entirely disappeared, while none of the symptoms of the hay fever remained but an occasional attack of sneezing, which immediately ceased on the instillation of a few drops of the serum in the nose.

CASE 10.—Mrs. L., aged 40 years. Hay fever for 16 years, with the attack commencing on August 16. She was seen on August 30, and stated that for 2 or 3 hours each day the symptoms were so severe that she had to remain in a darkened room with the windows tightly closed; the attacks being brought on or made much worse when she was in the vicinity of golden rod. The eyes were suffused, there was free

watery discharge, with total anosmia and inability to breathe through the nose. There was also intense itching of the eyes, nose, palate and entire face, with violent attacks of sneezing every few minutes. A drop of the serum was placed in both eyes and nasal chambers and almost immediately the entire symptom-complex disappeared. She was given the dry serum to use as required, and reported one week later that it produced a soothing effect on the nasal mucosa, but the sneezing attacks, while not as frequent, were as severe as before. The serum was then instilled, with entire relief from all symptoms for $1\frac{1}{2}$ days, and by using it herself she was able to keep the disease in abeyance for 2 weeks longer, when all manifestations ceased and she was free from the hay fever several weeks in advance of its usual time of departure.

The results from the serum treatment in these cases, with but one exception, proved most gratifying, and in the only case in which hay asthma occurred it was promptly controlled, the results thus agreeing with those of other observers who have found that the hay asthma was relieved by the application of antitoxin to the nose. It has apparently no effect, however, upon an accompanying bronchitis or semiasthmatic condition not dependent upon the hay fever, as shown by one of my cases previously mentioned. Untoward effects seem to be entirely absent in my cases and the experience of other observers and in whatever amount the serum was employed it has seemed to be perfectly harmless.

While the small number of cases presented is hardly sufficient to base accurate conclusions thereon, yet it is desired, as the result of the experience obtained with the golden rod antitoxin, to suggest that:

(1) The serum produces prompt and positive amelioration of the symptoms of fall hay fever in the majority of cases.

(2) In a smaller number this favorable result is soon accompanied with the complete disappearance of the affection.

(3) Where slight or no action is seen after its use, pollen as an etiological factor does not predominate.

(4) When results are obtained, it favorably influences all the manifestations of hay fever.

(5) While I am unable to state from personal experience the effect of the serum upon hay fever occurring at other times

of the year, or upon its effects when administered in advance of the attack, yet when given during the attack, irrespective of its severity, it produces marked palliation rather than absolute cure.

(6) Its effects upon future attacks remain as yet unknown.

(7) The serum in powder form is slightly soothing to the nasal mucosa; has but little influence upon the other symptoms of the affection, and in occasional cases it may act as a direct irritant.

Finally, as a result of larger experience, especially with hay fever occurring at other times of the year, it may become necessary to modify some of the opinions in regard to this antitoxin.

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INTERNAL HEMORRHAGE IN A CASE OF TYPHOID.

TREATMENT WITH ADRENALIN AND ACETOZONE.

BY C. E. GILLIATT, M. D., ALLENDALE, ILL.

A male, 18 years of age. Family history: father died of pulmonary hemorrhage; mother died in labor. I first saw the patient October 8, 1903. The disease ran the usual typhoid course until October 31, when the patient, while at stool, passed over a pint of pure blood. I was called and gave him a hypodermatic injection of morphine and atropine, and directed the application of a cold pack to the abdomen.

The following morning I returned with a bottle of adrenalin and gave him fifteen drops, leaving instructions to repeat the dose every three hours. While I was present some blood was passed, but none appeared after the administration of adrenalin. The bowels were locked up for six days and then opened by enema. A solution of acetozone, 40 grains to three quarts of water, was given, with the adrenalin, for a week, the patient making a slow convalescence. I attributed the boy's recovery to adrenalin.

SCARLET FEVER.

BY WM. HENRY, M.D., HARMON, ILL.

This is a disease which is both contagious and infectious—it is contagious because the disease may be contracted by contact; infectious because particles may be carried by floating in the air. There are three degrees of the disease, a mild simple form and a severe type, and a malignant form which almost invariably proves fatal. It is characterized in the incipency by headache, fever and vomiting, being followed by a rash sore throat; there is a red strawberry tongue coated in the center; there is nervousness, high fever, the temperature as high as 106 and 107 degrees, the temperature may keep up for several days, the glands in the neck may become enlarged and painful and may form abscesses; usually there is constipation, the urine becomes high colored and does not flow freely. The rash extends all over the body; it usually commences about the neck. Small children may be taken with spasms. I attended one case of a little boy, about two years old, who did not seem to be very sick, but who took a spasm and never came out of bed, but died in the spasm. Some become delirious and are very restless and will not sleep at night or day. Sometimes the tonsils become swollen and ulcerate. There are many ways of prevention; one is to keep other children away from the sick patient; fumigating with sulphur is a good thing. I believe that the giving of sulpho-carbolate of soda will keep the well ones from taking the disease. The past month I attended the case of a little girl, about twelve years of age, who was taken with scarlet fever. I kept her away from the remainder of the children and fumigated the house with sulphur and kept a dish of carbolic acid and water heated nearly to the boiling point on a stove which kept a vapor in the room all of the time; at the same time I gave the patient tincture of aconite for the fever and solution of chlorate of potassa as a gargle for the throat; at the same time she was taking sulpho-carbolate of soda, the other children were also taking the sulpho-carbolate as a preventive, and it is now a month and none of them has been taken down with the disease.

The family were quarantined for about three weeks and thus far there has been no new cases of the disease in the town. After

the fever had left the girl, her lower extremities became swollen and painful, so much so that she could not walk. For this I coated the limbs all over with antiphlogistine and rolled them in cotton and left them for forty-eight hours; after removal of same, the soreness and swelling had all gone and has not since returned. She is now convalescent and getting well without any sequela thus far.

THE NECESSITY FOR AN EARLY DIAGNOSIS IN THE PREVENTION OF DEFORMITIES.*

BY REGINALD H. SAYRE, M.D., NEW YORK.

Orthopedics as defined by Audry,† the first to use the word in 1741, is the art of preventing and correcting deformities in children.

If the art of preventing deformities were well understood at the present time, the majority of the cases that now visit the orthopedist would not have the unsightly figures they possess.

With the exception of congenital and traumatic deformities, there is a long interval between the commencement of the disease, which gives rise to the distortion and the appearance of the latter, but it is rare for patients to visit the orthopedic surgeon until the deformity has become marked, and very often irremediable.

In no department of surgery is the old adage, that prevention is better than cure, so fully realized as in orthopedics, and the majority of the operations that the orthopedic surgeon is called on to perform would be rendered unnecessary had adequate treatment been instituted sufficiently early.

For instance, take a congenital talipes equinovarus. If proper manipulation to correct the deformity is begun at birth and retention in the improved condition maintained, it is extremely rare for the deformity to be present by the time the child is old enough to stand; and if his feet have been brought into a proper position before this, each step he takes serves to push them in the right direction, while, on the contrary, if they have

* Read by invitation before the Philadelphia County Medical Society, Oct. 28, 1903.

† *L'Orthopédie ou l'Art de Prévenir et de Corriger dans les Enfants les Différentes du Corps.* Par M. Nicolas Audry, Conseiller du Roi, 1741.

been allowed to stop short of full correction, each step tends still further to increase the deformity, and the longer time that weight is borne on the foot in an improper position the more difficult it is to effect a perfect cure.

The Chinese take a normal foot, and by infinite patience and perserverance and a bandage succeed in producing a marked deformity. The same patience and perseverance and a bandage properly applied in infancy are capable of curing almost every congenital clubfoot without further interference; and yet at the International Medical Congress recently held at Madrid the statement was made that these cases should not be touched for several months, as there was a possibility that the deformity might correct itself if left to nature. The statement that children will grow out of it has done more harm than can possibly be imagined, and until it ceases to be employed good results will not be secured.

The constant tendency is not to "grow out of" deformities but to "grow into" them, unless the cause that produces the deformity is removed, and the orthopedist requires the aid of the family practitioner in detecting the existence of disease at the earliest possible moment, in order that proper treatment may be immediately commenced, instead of waiting until the deformity has become pronounced and then endeavoring to cure what should never have been allowed to occur.

Take, for example, a case of rickets: Why wait for the occurrence of bowlegs and knockknees or a curved spine? The large epiphyses, the sweating of the head, the irregularity in teething, the delayed ossification of the fontanelles, the enlarged abdomen and evidences of malassimilation of food, one or all of these symptoms will be present to warn us of danger, and if these warnings are heeded it will seldom become necessary to resort to osteotomy or osteoclasia to cure deformities, as they can usually be prevented from occurring.

In infantile paralysis, we find one of the largest fields for preventive surgery. Some of the most intractable deformities have their origin in the disturbed equilibrium of the muscles controlling the distorted joint, and from weight-bearing while the joint is held in an improper position. If a growing bone is subjected to constant pressure in an abnormal direction, its growth will be abnormal, and after it has developed along

these abnormal lines it is often impossible by any operation to attain either symmetry or good functional use of the joint.

Children who have been afflicted with paralysis of any sort should be most carefully watched, and, if any tendency to deformity is observed, proper means should at once be taken to hold their growing bones in as nearly a normal position as possible until they have become ossified.

To render these general statements more definite, let us suppose a case of anterior poliomyelitis, in which the anterior and posterior tibials and the quadriceps extensor cruris have been paralyzed. As a result the arch of the foot gives way, the foot is everted, the astragalus becomes prominent, and often we have marked genuvalgum. The hamstrings, unopposed by the quadriceps, displace the tibia backward, the biceps rotates the foot outward, and from its constant pressure on the outer side of the knee joint the external condyle of the femur at times becomes almost completely absorbed, and the lower surfaces of both condyles altered in shape, so that the articulation looks backward and downward. Even though the direction of the leg is straightened by osteotomies, the articulating surfaces are often so altered in contour as to impair locomotion still more than the paralysis would have done, had the bones been held in proper position by apparatus during the child's growth, and so compelled to develop in a nearly normal manner.

If a torticollis is allowed to remain uncorrected for a number of years, in consequence of the patient's constant efforts to adapt himself to the crooked position of the head, there is almost certain to be a distortion of the face which is very apt to be permanent, and quite frequently a lateral curvature of the lower part of the spine is caused by efforts to twist the face straight.

Lateral curvature of the spine is one of the bugbears of orthopedic surgery, and above all other distortions emphasizes the necessity for heeding Audry's definition of orthopedics, "The art of preventing and of curing deformities."

"The art of preventing!" If the general practitioner would only pay a little attention to this most important art, how much good he would do! It seems that we are just beginning to realize that many of our diseases are preventable. The layman, as well as the physician, knows it is much more practical

to prevent typhoid fever than to cure it. Many articles are written on preventive medicine, and we are told that this is to be the feature of twentieth century practice. I trust it may be, and that the prevention may embrace surgery as well as medicine, and orthopedic surgery as well as general surgery.

The day of the man who tells the mother that a child will grow out of a lateral curvature of the spine, and that the deformity is so slight as to amount to nothing, should have passed by long ago, but unfortunately it has not, and until it is fully recognized that every deviation of a spine from the normal is a serious matter, calling for careful supervision of the growing child, we will continue to see cases of frightful and unnecessary deformity.

Whenever a mother brings a child for examination because its body does not seem to her to be quite normal, you may be almost sure that she is correct, and before you give an opinion to the contrary take time to strip the child and examine it at your leisure. Do not do this in a hurry if you would avoid error, and if you are pressed for time appoint another occasion when you can give the case your attention, as these patients often hold themselves perfectly straight when first examined, and time must be allowed for them to become accustomed to their surroundings, when they will allow their muscles to relax and the body to assume its ordinary attitude. If you have not time to wait for this relaxation you will be deceived and not give a correct opinion. One of the first things noticed is an apparent elevation of one hip. Careful measurement will probably show that both legs are of equal length, and the iliac crests are at equal distances from the floor, but the twist in the lumbar spine and the change in the position of the ribs have so altered the contour of the waist as to produce the appearance of an elevated hip. Sometimes this is more noticeable from the front and frequently there is a greater fullness of one side of the abdomen than the other.

Another place in which the commencement of a lateral curvature is often noticed is the space between the body and the arms, as the latter hang by the sides. If these spaces are not symmetrical, look the patient over with great care, for something is sure to be wrong.

The scapulæ also are ready to give warning of trouble very early in the commencement of spinal rotation, and if either one looks more prominent than its fellow, or not on the same level, make the patient bend forward with the arms drooping toward the floor and carefully examine the contour of the ribs, which will be thus exposed by the scapulæ sliding forward along the thoracic walls. At times it will be easier to detect irregularities of the two sides by palpation than by inspection, and you should never neglect to pass your hands over both sides at once.

In front, the distance of the nipples from the umbilicus should be noticed and also the comparative size of the breasts. Irregularities here are among the early signs of rotary lateral curvature.

While the elevation of one hip noticed by the parents is often only apparent, it does not follow that it is always so, and shortening of one leg is often a cause of lateral curvature, notwithstanding the statements of some text-books that it is immaterial and may be disregarded. It may and does give rise to rotary lateral curvature of the spine.

In Pott's disease of the spine we meet with another marked illustration of the necessity for an early diagnosis if we wish to prevent deformity. The disease is present months and sometimes years before the deformity, and gives rise to such marked symptoms that its presence can only be overlooked through inattention. Many a time the diagnosis of an inflammation of the vertebræ may be made simply from observing the attitude of the patient before removing the clothes; the careful gait, anxious look in the eyes, drawn expression of the mouth, stiff carriage of the head on the trunk, and shortened respiration proclaiming as clearly as possible the presence of vertebral inflammation. Whenever a joint is inflamed, nature tries to protect it and prevent it from motion, and there is an involuntary spasm of the muscles controlling this joint which limits its motion to a greater or less degree. This phenomenon is manifested very early in Pott's disease, and, combined with the effort to prevent concussion, gives rise to the peculiar gait characteristic of this malady. If the disease is situated in the cervical region the attitude may resemble very closely that of torticollis, but may be differentiated from it by the muscular

spasm and the pain on movement, and is usually accompanied by a slight elevation of temperature. In the upper thoracic region we find usually elevation and rigidity of the shoulders, while in both places the lesion is often accompanied by a peculiar sharp, grunting respiration that at times may be mistaken for the sound produced by a foreign body in the upper air passages. When the disease is situated in the lower thoracic region, we often meet with a peculiar position of the head, which is thrown as far back as possible, sometimes till the face looks directly upward, in order to remove the weight, as far as possible, from the front part of the vertebral bodies and transfer it to the transverse processes. In this part of the spine we sometimes see contraction of the abdominal muscles which gives a peculiar appearance, as if a string were tied around the body. The pains which accompany Pott's disease are almost always referred to the distal extremities of the nerves which leave the spine at the point of the inflammation, while it is very rare for the pain to be located in the back. In consequence, these patients are often treated for worms, colic, indigestion, and stone in the bladder for months without any suspicion that the source of trouble is in the spine.

At times there may be a question as to the diagnosis between Pott's disease and lateral curvature of the spine, as a lateral deviation is present in the former trouble much more frequently than is usually believed to be the case. The importance of a correct diagnosis becomes doubly manifest when we consider that Pott's disease requires absolute quiet of the spine, while lateral curvature demands gymnastic exercises. Those who have had but slight acquaintance with spinal diseases imagine that it is impossible to confound those two diseases, but those who have seen the largest number of cases will be the first to acknowledge that at times it is very difficult to make a differential diagnosis in incipient cases. Therefore, if you find a slight increase of temperature in a doubtful case especially if there is any suggestion of muscle spasm, err on the safe side, treat it as Pott's disease, and protect it from motion until time has cleared up the diagnosis.

Just as in inflammation of the spine we do not find pain or deformity in the spine till late in the progress of the disease, as a rule, so in hip-joint disease it is rare for the patient to

complain of pain in the hip at first. Usually the pain is referred to the knee on account of the termination there of a branch from the obturator nerve, which also supplies the hip joint. It is also common to find the pain referred to the large toe, and patients are not infrequently brought for examination by parents who imagine there is something the matter with the foot or that the toe has been injured by a nail in the shoe, whereas the real situation of the trouble is in the hip joint. Another early diagnostic point, which is often neglected, is the presence of spasm in the muscles of the calf on the side of the affected hip.

The earliest manifestation of joint inflammation is probably the involuntary spasm of the muscles controlling the joint, and it is doubtful if inflammation is ever present without this symptom. It is the first to appear and the last to subside. As long as it is present the joint requires protection. This spasm produces very slight restriction of motion at first, and may not be detected unless time is allowed for the patient to become relaxed after being stripped. The first step in the examination of a patient in whom disease of the hip joint is suspected, is the complete removal of the clothing. Many cases are not detected early because they are not examined thoroughly. Almost the first symptom noticed, after time has been allowed for the patient to relax the muscles, will be that the weight is borne largely on one leg, the other being slightly flexed at the hip and knee; the leg will also be slightly abducted and rotated slightly outward. There is almost always a slight synovitis in these cases, and as the capsular ligament is relaxed by flexion, abduction and eversion, and thus can contain a larger amount of fluid, the hip involuntarily assumes this position.

As the disease progresses these deviations from the straight line become more and more marked, but later on, if the joint capsule has been ruptured, may be replaced by adduction instead of abduction, and an apparent shortening instead of a lengthening of the affected limb. The buttocks also afford a means of diagnosis, that on the affected side being lower than its fellow and the gluteofemoral crease not so well defined.

After examination in the standing position the patient should be placed on the back on a table or on the floor. A bed will not answer, as its soft surface will obscure slight deviations from the normal which are essential to a diagnosis.

The back should be placed so that the spine touches the table throughout its entire length, and the pelvis placed so that a line through its anterior superior iliac spines will be at right angles to a line passing through the centre of the sternum, umbilicus and symphysis pubis. The sound leg should then be grasped firmly and the thigh flexed on the abdomen as far as possible, abducted, adducted and rotated, the patient being urged at the same time to relax all its muscles as completely as possible, observing the range of motion. The same should then be done with the lame leg, and any limitation of motion as compared with the other side noted. If there is inflammation of the joint, there will be restriction of motion, and at times there will be a muscular spasm, that, once recognized, can never be mistaken for anything else. If there is contraction of the psoas muscle, it will be impossible to bring this leg flat on the table without causing tilting of the pelvis, and it may be impossible to bring the legs in a straight line with the trunk without disturbing the relative positions of the interiliac line and the line through the centre of the body.

The fact that pain is not caused by these motions does not bar out the presence of inflammation in the joint. The motion permitted by the muscle spasm is within the range that would cause pain, and there is no necessity of forcing the limb beyond that limit, and so producing pain in order to reach a diagnosis. If the disease has progressed to such a point that slight movements of the joint give rise to pain, much valuable time has been lost; examination of such a case at a much earlier period would have shown the presence of inflammation, and the application of suitable treatment have prevented the further development of the disease.

Another complaint that supplies the orthopedist with cases that are most unsatisfactory to treat is sciatica, when it results from tuberculosis, or other disease of the lumbosacral and sacroiliac articulations. If it were recognized that sciatica is but a name for a condition produced by a variety of causes, and efforts made to determine the origin of the pain in the sciatic nerve, many cases of bone tuberculosis would be recognized much earlier than they are at present. The attitude of a patient with inflammation in the sacroiliac synchondrosis is so typical that, once seen, it can never be mistaken, and serves to differ-

entiate the case from hip-joint disease, should the location of the pain or other symptoms give rise to any doubt. The body is bent away from the affected side, and a peculiar twist given to the spine that must be seen to be appreciated.

The knee is the seat of many kinds of inflammation, and if it were universally the custom to regard as serious all injuries of this important joint, and give it immediate rest, many cases of chronic inflammation would be prevented. As it is, many slight sprains are allowed to go without protection for weeks and months, because they do not give rise to great inconvenience, and it is not until a chronic synovitis, with decided deformity and perhaps erosion of cartilage, has taken place that the case is thought sufficiently serious to require protection and crutches.

Whenever there is slight synovitis in a knee, and especially when the traumatism has been but trivial, be on your guard. Immobilize the knee and put the patient on crutches, or, if it is a child who cannot be trusted to use them, apply a splint that will prevent motion, and keep the weight from the joint.

These same principles apply to all the other joints of the body but these joints seem to receive more attention at the hands of the general practitioner, and so do not give rise to so much subsequent trouble. The sprained ankle is regarded as a worse thing than a fracture by common consent, and is usually treated promptly and efficiently, while the joints of the upper extremity are usually protected, because this does not involve so much discomfort in the patient, and so is insisted on many times when it would not be if the lower extremity were involved.

Let us hope that the time is not far distant when the first indications of inflammation in a joint will be promptly recognized and as promptly given adequate protection, so that the first deviations from the normal in the bodies of growing children may receive attention and be arrested and prevented from increasing. If this is done by the family doctor, we shall have taken a long step forward toward relieving the world of the great mass of deformities that are now so common.

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EDITORIAL.

MUD SLINGING IN EXCELSIS.

Some people have such a poor conception of business that their highest ambition is to employ the methods in vogue with fish-women at a market. They do not prove the claimed superior worth of their products by clinical and chemical demonstration, but prefer to resort to mud-throwing and underhand work. They will not come out in the open and disclose themselves like a fair enemy, but they sneak about bushwacking and trying to take shots at the back of an honorable opponent instead of facing him. We are led to make these few desultory remarks by the attempts which some unscrupulous parties have made to belittle that well known standard iron preparation, Gude's Pepto-Mangan. Whilst not attacked by name, so many covert allusions are made that any one who can read between the lines will certainly know that these small attacks are directed at Pepto-Mangan (Gude). In another editorial in this issue will be found what the *Medical and Surgical Reporter* has to say on the subject.

Of course every right-minded person will not hesitate to condemn such methods and every fair-minded man will share in this sentiment. Underhand methods are unbusiness-like and are really a confession of weakness and really a *petitio in forma pauperis*. We cherish the hope that those guilty of such reprehensible conduct will mend their ways and endeavor to so manage their business affairs that they will receive words of praise instead of those of condemnation. We cannot refrain from telling our readers that Gude's Pepto-Mangan still remains the best organic iron preparation, and it bids fair to retain this much deserved reputation for many years to come.

AMERICAN MEDICAL ASSOCIATION MEETING.

The coming meeting of the Association is not yet referred to with that enthusiasm which it should evoke, but this lack of warmth is no doubt due, so far as the Mississippi and the West and Southwest are concerned, to the fact that the World's Fair at St. Louis is so near its opening. Physicians are very much the same as the mass of the people, and are more anxious to see the "big show" than go to a medical convention. In the East there will be a heightened interest for the reason that the medical meeting will occur at their very door and there will exist ease of reaching the locality, as well as the conveniences and pleasures of a watering place at a season when it is not crowded. We do not desire to argue that the profession West of the Alleghanies will not be represented and the proportion lacking from this district will not be more than made up by those from the East, but we do maintain that a point near St. Louis would have attracted a larger number from all directions, as it would have afforded them an opportunity of visiting the St. Louis World's Fair.

That Atlantic City is fully prepared to receive all who may come, in an adequate manner, is beyond all question. We give a list of the hotels at this locality in another part of the present issue of the JOURNAL. The prices are moderate, so that the item of cost can exercise no deterrent influence upon those who contemplate attending the meeting. There really is no reason why there should not be as equally a large, if not a

larger attendance at Atlantic City than there was at New Orleans. All conditions will be favorable to this and the few who do not come will find that they will be more than counter-balanced by the many who will.

All the members of the medical profession who are located East of the Mississippi River will find that the matter of transportation is one of very easy solution. There is a railway line which is unsurpassed for rapidity, safety and comfort, and which makes travel over it a pleasure as well as a delight. All our readers know that we refer to the Baltimore and Ohio Southwestern, which does not propose to let any other railway be its superior so far as the transportation of passengers is concerned. All that it is possible to do in the passenger department of a railway line is being done by this road, and the improvements which are being daily made is certainly evidence of this fact. Our readers must not forget one fact, however, which is that all these advantages are not exclusively reserved for those East of the Mississippi River. Those who are located West of it may participate in the same advantages by having their tickets read *via* the Baltimore and Ohio Southwestern. We are certain that none of our readers will ever have cause to regret having chosen this line as the medium of his transportation.

WHEN YOUR CASE IS WEAK ABUSE THE OTHER SIDE.*

This maxim has been a favorite standby with the legal profession from time immemorial, and unfortunately certain pharmaceutical manufacturers have recently seen fit to make use of that maxim. This is particularly true of the manufacturers of a certain iron preparation.

The impudence and effrontery with which these people try to hoodwink the medical profession is rather remarkable.

No other preparation ever came before the medical practitioner with so little detail as to methods of preparation, composition, therapeutic effect, etc., etc., and nevertheless the profession is asked to accept the wildest and most extravagant statements as to its wonder-working capabilities. This is not all. The makers of this preparation, in seeking the support of

* Editorial in the Toledo Medical and Surgical Reporter, April, 1904.

the profession covertly attack and sling mud at all other iron preparations that have been before the profession for years. They single out Pepto-Mangan, a combination which has stood the tests of the leaders in the scientific medical world both here and abroad, an organic iron combination in which, in its results, the general practitioner and the hospital clinician have learned from experience to place implicit confidence.

This unbusiness-like method of attempting to cast discredit upon other reliable and thoroughly tested combinations we cannot term otherwise than despicable, and furthermore we know our readers cannot be influenced by unsupported statements of financially interested parties, but will always bear in mind that Gude's Pepto-Mangan was submitted to the profession as an organic iron product, and the results obtained by its use, as also the scrutiny of analysis by chemists of repute, substantiate all that has ever been claimed for it.

Attempting to foist upon the attention of the physician a product simply by insinuation that known articles are inferior, is a manner of doing business which should receive the stamp of disapproval by every one of our profession.

The American Gastroenterological Association will hold its seventh annual meeting at Haddon Hall, Atlantic City, N. J., June 6 and 7, 1904. A leading feature will be a symposium on Gastric Ulcer, which will occupy three sessions and be introduced by Dr. J. C. Hemmeter.

The Tenth International Congress of Ophthalmology is to be held in Lucerne, Switzerland, September 13, 14, 15, 16 and 17, 1904. The official reception of members will take place in the evening of September 13. The mornings and afternoons of the 14th, 15th and 16th will be occupied with scientific work. On the 17th an excursion will bring the congress to a close.

BOOK REVIEWS.

A System of Physiologic Therapeutics. A Practical Exposition of the methods, other than Drug-giving, useful for the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D. Vol. VIII. Rest, Mental Therapeutics, Suggestion. By FRANCIS X. DER-CUM, M.D. Ph.D. 8vo. pp. 332. [Philadelphia: P. Blakiston's Son & Co. 1904. Price by Subscription only: Eleven Volumes, cloth, \$27.50; half-morocco, \$38.50.

This volume is certainly entitled to rank among the best which so far have appeared in the System of Physiologic Therapeutics. The author has demonstrated in this, that he is master of his subject and he handles it both in a thorough and competent manner. The book is divided into three parts, dealing respectively with Rest, Therapeutics of Mental Diseases, and Suggestion. In Part I. the subject matter is of the highest importance and is deserving of more than passing attention and study of a superficial character. Our readers will no doubt remember the classic work of Hilton on Rest and Pain, a work which to this day has not lost either its interest or its value to both the physician and the surgeon. In the volume before us the author has elaborated upon his predecessor's work and presents us with a more modern view upon the subject from a purely therapeutic point of view.

In his consideration of rest as a therapeutic measure the author does not entirely set aside drugs, but he advocates but few, and these only in special conditions. Part I., devoted to rest, is divided into six chapters, in each one of which the subject is considered in an analytical manner. In Chapter I. Function and its Results are considered; among other things the toxic action of waste products. Chapter II. deals with Chronic Fatigue—the Fatigue Neurosis, which is accompanied by motor, sensory, psychic, and visceral phenomena. In Chapter III. is taken up the subject of Rest in Neurasthenia and Allied States. This contains a thorough consideration of the subject and is certainly of superior value in view of the side-lights cast upon it by the author. Hysteria is the subject of Chapter IV. and it is here that the author demonstrates his ability to handle his subject in a masterly manner. In Chapter V. Hypochondria forms the subject, and the differentiation of hypochondria from other neuroses is given in a manner which is easily understood and demonstrative as well. The author very justly points out that it is a very important subject which has been too much neglected. It is particularly in the methods he gives of the management of children, who show indications of hypochondria, that he excels. Chapter VI, although not a

long one is very useful, dealing as it does with the Application of Rest in Chorea and other Functional Nervous Diseases; and in Organic Nervous Diseases. A most excellent chapter, which is well written.

Part II. is on Therapeutics of Mental Diseases, considered in two chapters. Chapter I. is on the Prevention of Insanity and the General Principles of the Treatment of the Insane. This is a comparatively short chapter in view of the fact that the Treatment of the Special Forms of Mental Diseases is taken up in Chapter II. The entire part could certainly be made longer and more elaborate were it not for the restrictions placed upon the author. Short as it is, it certainly covers the ground pretty fully and in a thoroughly competent manner. Part III. on Suggestion is disposed of in two chapters. Chapter I. is on Normal Suggestion, which the author looks upon as being within the legitimate sphere of therapeutics. In Chapter II. he speaks of Suggestion by Mystic and Religious Methods; Suggestion under Artificially Induced Hysteria—Hypnotism. Under the mystic and religious methods he includes Shamanism, Faith Cure, and Eddyism. He warns amateur hypnotizers against the baneful effects which will be exerted upon themselves.

From the above meager description of the contents of the volume before us it will be readily seen that it is interesting as well as instructive in the highest degree. The high standard of the work has been preserved throughout the successive volumes as they appeared, and we have no fear that the one which concludes this truly monumental work will not share this excellence. The names of the authors who will contribute to it are a sufficient guarantee of this; and we desire to congratulate the publishers upon having carried out their work so successfully up to the present moment.

A Manual of Clinical Diagnosis. By means of Microscopical and Chemical Methods. For Students, Hospital Physicians, and Practitioners. By CHARLES E. SIMON, M.D. Fifth Edition. Thoroughly Revised and Enlarged. 8vo. pp. 695. Illustrated with 150 Engravings and 22 Plates in Colors. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$4.00, net.

Within comparatively a few years diagnosis has been brought to a scientific basis, and what was formerly a comparatively crude and imperfect method has been reduced to an exact and positive one. This has been in a large measure due to finer and more elaborate instruments of precision as well as to improved as well as new methods of technique. To-day a supposition is no longer admitted; it must be a proven fact, based upon indubitable evidence. All methods must be exact

and, as a natural consequence, the deductions which are made share in this exactness and are of such a nature that implicit reliance may be placed upon them. Naturally, diagnosis shares in these advances as well as advantages and becomes exact in an equal degree. As a natural corollary to this, treatment becomes more intelligently directed and empiricism becomes relegated to that oblivion which it deserves. Having therapeutics improving *pari passu* with methods of examination and diagnosis, we are approaching that goal so long sought by the medical profession of making medicine a science instead of an art; and it is books of the nature of the one before us which are destined to work this change.

Dr. Simon has certainly produced a work of more than ordinary value and that it has been appreciated is manifested by the fact that it has reached its fifth edition inside of eight years, the fourth having been completely exhausted in two. We have no doubt, whatever, that this great popularity was attained through the fact that the author's object has been successfully carried out by him—that of furnishing exact methods of diagnosis which can be easily understood and which are susceptible of being carried out in their practical application by every student and practitioner. None of the methods which are given are either complicated or abstruse, and their very simplicity is what recommends them when it is taken into consideration that they accomplish the object of supplying exact methods of diagnosis.

In the present edition, besides a careful revision, many additions have been made. The chapter on the blood has been enlarged by sixty pages and almost entirely rewritten, so that it represents the principles of hemology as they are known today, with the latest advances made in this subject. The chapter on technique has been written in a manner which evidences that special pains have been taken in its preparation. In connection with this a special chapter dealing with the nature of anilin dyes and the principles of staining has been introduced, and it is by no means the least valuable in this work, inasmuch as it will prove of the highest value to the clinical laboratory worker. The author, for the convenience of reference, as he states, has re-arranged the subject of leucocytosis in such manner that hyperleucocytosis and hypoleucocytosis are separately considered in connection with the different varieties of leucocytes. A new section which has been introduced deals with the kryoscopic examination of the blood.

The bacteriology and parasitology of the blood have received additions, with sections on paratyphoid fever, gonococcus septicemia, bubonic plague, trypanosomiasis, and spotted fever. In fact, all the text has been thoroughly brought up-to-date and in line with the latest scientific discoveries, the results of re-

search and study by those most competent to carry on such work.

This book is one which is a whole library within itself and its value does not lie entirely in that it can so thoroughly teach the principles and practice of scientific clinical diagnosis, but it is as well an educator which will enable him who studies it to understand thoroughly the advanced work of others in the field of diagnosis and medicine. The publishers have been liberal in the matter of figures and plates, all of which are drawn and colored in an irreproachable manner. The press-work and binding are most excellent, and we have no doubt that the present edition of Dr. Simon's great work on clinical diagnosis will enjoy a greater usage than previous ones have.

The International Medical Annual. A Year Book of Treatment and Practitioners' Index. By Thirty-two Contributors. Twenty-second Year. 1904. 12mo. pp. 770. Illustrated. [New York: E. B. Treat & Company. 1904. Price, \$3.00.]

This is beyond doubt one of the standard annual medical publications which gives a thorough review of the progress made in medicine during the past year preceding its publication. The contributors have always done their work faithfully, and this has resulted in the production of and introduction to the medical profession of the useful Annual before us. It may be truthfully said that, although the present issue is larger than any of its predecessors, it has not deteriorated one whit in its value, but rather the contrary. This cannot fail to prove being a pleasure to its readers and a source of more than ordinary satisfaction to the gentlemen who have contributed to its pages, and a just matter of pride to its publishers, who have done everything in their power to produce a work in which they have spared no pains or expense. We have examined this last issue with more than ordinary care, and find that it not only presents a most complete and thorough index of treatment, but also furnishes a number of special articles from the pens of authors regarded as most competent authorities on the subjects of which they write.

The volume before us contains many special features of more than ordinary importance. We are treated to a general review of therapeutics which is very valuable in its discussion of new remedies and methods of medication. The author is very temperate in his views, and none the less exact and reliable. Following this is a dictionary of remedies which cannot but prove useful, in the highest degree, to the physician who is desirous of acquainting himself with the nature and action of the newer remedies which he may wish to use. After this we are presented with a very thorough review of the subjects of radio-activity and electro-therapeutics. This cannot but prove

most interesting to all the readers of the Annual, as the present is, beyond all doubt, the period of radio-activity in medicine. The studies made of radium, the Roentgen-ray and other electro-therapeutic methods has almost revolutionized therapeutics in many respects, although we only know the very beginnings of the subject, and further development will be necessary to place us on a firm basis. A good general review of medicine and surgery precedes the dictionary of treatment. This really constitutes the body of the work.

Among the more notable features to which we desire to call attention are the articles on anesthesia, the brachial plexus, and the ear, which is specially illustrated by a series of twelve stereograms. Gastric disorders, splenic anemia, and Banti's disease are the titles of articles deserving of more than ordinary attention. The book closes with a well considered chapter on sanitary science, in which the author very fully demonstrates that it is a science, and somewhat more than was formerly designated as hygiene and more deserving of serious study.

A feature which will attract more than ordinary attention is the illustrated articles on small pox, varicella and other infectious diseases; as also that on the antitoxin eruption. In all of these the plates, which are quite numerous and in some cases in series, clearly show the nature and distribution of the eruption, and this of itself is of the greatest value to the general practitioner.

The work, taken altogether, is of a value not to be underrated. The plates are numerous and well executed, and those in colors are certainly to be most highly commended as being true to Nature in their tints and drawing. The other figures are also good, although comparatively not so numerous as the plates, which amount to thirty-four, the former being but thirty-eight. The publishers have certainly been very liberal in this respect. The printing, binding, and general mechanical execution as well as paper are above the average. This volume should have a large sale in view of the fact that the price has been made so reasonable.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. March 1, 1904. 8vo. pp. 337. Illustrated. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address.

This present volume of Progressive Medicine is one which marks a new era in the publication of this sterling series on the progress in medicine. The publishers issue the volumes

in paper binding at a reduced price, a course which will please many subscribers and, at the same time, enable them to have them bound in a style more pleasing to them as well as more uniform with other volumes in their respective libraries. In all other respects the volumes are exactly alike. The system of issuing medical works in paper bindings is the custom on the Continent, and no one ever expects to receive books from French, German, Italian, or Austrian publishers except in this form.

In the volume before us, *Surgery of the Head, Neck and Thorax* is passed in review by Dr. Charles H. Frazier. He goes into a rather lengthy consideration of the surgery of the skull and brain, in which field surgeons have been rather active during the past twelve months. The mouth, the neck and the mammary gland are also accorded some considerable space, and this in view of the fact that all of these have had much attention devoted to them recently by surgeons.

The review of the progress made in the study of Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia, and Influenza, by Dr. Robert E. Preble, is thorough and well considered. He gives a very interesting account of the manner of transmission in cases of infectious diseases. Diphtheria and malaria, as well as pneumonia, come in for quite a share of attention; scarlet fever, tuberculosis, and tetanus, as well as typhoid fever, are noticed in proportion to their importance. Dr. Floyd M. Crandall gives a good account of the progress made in Diseases of Children. The new-born infant, infant feeding, diseases of the alimentary tract, and of the respiratory tract, are passed in review and pretty thoroughly considered. Diseases of the heart and of the urinary tract also receive a share of attention. Laryngology and Rhinology are considered by Dr. Charles P. Grayson. He writes a short review on paraffin prosthesis. A number of subjects, such as hay fever, atrophic rhinitis, and prolonged intubation are passed in review. The operative treatment of malignant disease of the larynx is reviewed at some greater length, and it is a subject of some importance at the present moment in view of the views of some surgeons in regard to the condition of the throat of the Emperor of Germany. Dr. Robert L. Randolph gives us an interesting digest in connection with Otology. He begins with a review of the literature on the external ear, following this with a larger review of diseases of the middle ear. This is comparatively long and followed by the diseases of the mastoid which concludes this volume. The editor continues to express his conservative position in regard to the radical mastoid operation and finds that good authority backs him in this opinion.

We certainly cannot give this volume of *Progressive Medicine* an adequate review, as space prevents our entering into an analysis of its many good points. That he who gets this work will never regret the investment we feel sure, and we would encourage those who have never had the work to obtain it, and read it, as cannot fail to be of profit to them.

Manhattan Eye and Ear Reports. No. 3. March, 1904. 8vo. pp. 186. Illustrated. [Manhattan Eye and Ear Hospital. 1904.

This is a publication of the highest value and one which should be in the library of every oculist, aurist and throat physician. It is very well printed, excellently illustrated, besides containing articles of the highest practical worth and scientific value. This publication is a step in the right direction, and it is destined to occupy a position such as that which has been occupied for years by the celebrated *Charite Annalen* of Berlin. Dr. Jonathan Wright is Editor, and Drs. Edgar S. Thompson and Arthur B. Duel act as Associate Editors. All the articles are contributed by members of the hospital staff and are reproduced from the journals in which they have originally appeared. This is certainly a most excellent idea, as it enables one interested in the subjects with which it deals to have all the papers in one volume instead of being scattered throughout a number of publications and thus obviates the inconvenience as well as the possible inability of obtaining them as promptly as could be desired. We cannot give the price at which this publication is issued, but have no doubt that it may be obtained from the editor by addressing him at 103 Park Avenue, New York.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Manhattan Eye and Ear Reports. No. 3. March, 1904. 8vo. pp. 186. Illustrated. [Manhattan Eye and Ear Hospital. 1904.

The International Medical Annual. A Year Book of Treatment and Practitioner's Index. By Thirty-two Contributors. Twenty-second Year. 1904. 12mo. pp. 770. Illustrated. [New York: E. B. Treat & Company. 1904. Price, \$3.00.

Notes on the Chalybeate Springs of Spa (Belgium). A Medical Study with a Description of the Town and its Environments, and a Map. By R. Wybauw, M. D. Preceded by a Historical Introduction on the Influence of English Visitors Upon the Development of the Town of Spa. By Monsieur Albin Body. 12mo. pp. 79. [Spa: J. Engel-Krims. 1904.

A Manual of Clinical Diagnosis. By Means of Microscopical and Chemical Methods. For Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M.D. Fifth Edition, thoroughly Revised and Enlarged. 8vo. pp. 695. Illustrated with 150 Engravings and 22 Plates in Colors. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, \$4.00, net.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by H. R. M. Landis, M.D. March 1, 1904. 8vo. pp. 337. Illustrated. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-giving, useful for the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D. Vol. VIII. Rest, Mental Therapeutics, Suggestion. By Francis X. Dercum, M.D., Ph.D. 8vo. pp. 332. [Philadelphia: P. Blakiston's Son & Co. 1904. Price, by subscription only. Eleven volumes, cloth, \$27.50; half-morocco, \$38.50.

Archives of Electrology and Radiology is the name which has been adopted by the *American Electro-Therapeutic and X-Ray Era*. It continues to be published in Chicago at the price of \$2.00 per annum, and is still the official organ of the Chicago Electro-Medical Society.

Notes on the Chalybeate Springs of Spa (Belgium) by R. Wybauw, M.D., is a 79-page illustrated pamphlet, duodecimo in size, with a map of Spa and its environments. It will prove a very convenient little guide to those who conclude to visit this watering place and these will find it more especially congenial, as it enjoys the presence of many English visitors.

MELANGE.

American Medical Editors' Association.—The annual meeting of this Association will be held in the parlors of the Hotel Dennis, Atlantic City, N. J., at 2 P. M., June 6th. A most interesting programme has been prepared and many instructive papers upon Medical Journalism and allied subjects will be presented. All editors are most cordially invited to attend.

The Tri-State Medical Society of Iowa, Illinois and Missouri will meet in St. Louis, June 15th, 16th and 17th. An interesting program is being prepared, and some of the most distinguished physicians and surgeons of the country will attend the meeting. The president is Dr. W. B. La Force, Ottumwa, Iowa; and Dr. Louis E. Schmidt, 1003 Schiller Building, Chicago, is the Secretary. Dr. James Moores Ball, 3509 Franklin Avenue, St. Louis, is Chairman of the Committee of Arrangements.—W. B. La Force, President.

Railroad Rates to Atlantic City.—The Central and Western Associations of Passenger Agents have made a rate to the meeting of the American Medical Association at Atlantic City, N. J., of a single fare plus \$1.00 for the round trip. The Baltimore & Ohio Southwestern is ready to carry this rate on all its lines east of the Mississippi River, and has established a rate of \$23.25 for the round trip from St. Louis. Tickets will be on sale June 1, 2, 3, 4 and 5, and are good to return until June 13. They are also good for stop-overs at Washington, D. C., Philadelphia, and Baltimore, within the final limit.

Atlantic City Hotels.—A List of the Hotels and Prices—Ample accommodation for All.—Atlantic City has about 1,200 hotels and boarding houses. Out of these the committee has selected the following houses, with their rates appended, which they can recommend. Comfortable board may be obtained in Atlantic City from \$1 per day upward. The minimum rates apply to single rooms without baths, while the per capita rate per day for double rooms in most cases can be slightly reduced when two occupy the same room. For those wishing accommodations on the European plan, the Dunlop and Young's

Hotel are exclusively European; the Grand Atlantic, the Wiltshire, the Garden, the Islesworth, and the Rudolf, furnish accommodations on either European or American plans. The prices given below cover the American plan, except those referring to the Dunlop and Young's Hotel.

HOTELS. RATES PER DAY ON AMERICAN PLAN.

Bouvier.....	\$1.50 and up.	
Roxborough	1.50 to	\$2.50
Revere	2.00 to	2.50
Altamont Craig Hall	2.00 to	3.00
Archdale	2.00 and up.	
Belmont	2.00 and up.	
Berkshire Inn	2.00 to	3.00
Chester Inn	2.00 to	2.50
Dunlop, \$2.00 to \$3.00. European exclusively.		
Young's Hotel, \$2.00 to \$3.00. European exclusively.		
New Hygeia	2.00 to	3.00
Albermarle	2.00 to	3.50
Arlington	2.00 to	3.50
Holmhurst	2.00 to	4.00
Champlain	2.00 to	4.00
Kenilworth Inn	2.00 to	4.00
Hotel Majestic	2.00 to	4.00
Hotel Boscobel	2.00 to	6.00
Chatham	2.50 to	3.00
Glaslyn	2.50 to	3.00
Hotel New England	2.50 to	3.00
Ponce de Leon	2.50	
Wiltshire (also European)	2.50 and up.	
Hotel Imperial	2.50 to	3.50
Hotel Shoreham	2.50 to	3.50
Lorraine	2.50 to	3.50
Rittenhouse	2.50 to	4.00
Grand Atlantic (also European)	2.50 to	5.00
Raleigh	3.00	
Hotel Gladstone	3.00 to	5.00
Hotel Savoy	3.00 to	5.00
Hotel Strand	3.00 to	5.00
Haddon Hall	3.00 to	7.00
Islesworth (also European)	3.00 to	8.00
Shelburne	3.00 to	8.00
Seaside	3.50 to	4.00
Rudolf (also European)	3.50 to	5.00
Garden	3.50 to	6.00
Hotel Dennis	3.50 to	6.00
Royal Palace	3.50 to	6.50
Hotel Windsor	3.50 to	7.00
Hotel Chelsea	4.00 and up.	
St. Charles	4.00 and up.	
Hotel Traymore	4.00 to	8.00
Hotel Brighton	4.00 to	10.00
Marlborough House	4.00 to	10.00

In order to get good accommodations engagements for rooms should be made without delay. The committee will be glad to furnish any information desired, and will be pleased

to engage quarters at the various hotels, or physicians may write to the hotel direct. Wm. Edgar Darnall, Chairman Hotel Committee.—*Journal American Medical Association.*

Dislocation of the Carpal Scaphoid.—The patient of L. W. Ely was a man of twenty-five years, whose wrist was caught under an overturned automobile. The injury was at first considered as a crushing of the tendons and hot applications were prescribed. When seen twenty-four hours later by the writer the wrist was swollen and infiltrated, and presented on its flexor aspect a number of abrasions, showing the nature of the violence—that is, direct. Motion or pressure caused pain. The case appeared to be a Colle's fracture, and the patient was told that he must take an anesthetic and have it reduced. The operation was done that afternoon. Under ether, crepitus could be distinctly perceived in the wrist, though its origin could not be easily ascertained. By manipulation, the scaphoid could easily be dislocated on the dorsum of the wrist, and by pressure could be replaced. On this symptom the diagnosis was made. A skiagram taken at a later date showed a slight tipping forward of the scaphoid and a chipping off of the styloid process of the ulna; but there is doubt whether the lesion was a simple dislocation of the scaphoid, or whether it was accompanied by a fracture of this or of one of the neighboring bones. The skiagram showed no such fracture, but the crepitus seemed to come from a point very near the scaphoid. The dislocation, however, was unmistakable. The treatment was by anterior and posterior molded plaster-of-Paris splints, the posterior splint reaching to the end phalanges, the anterior to the metacarpophalangeal joints. At the end of one week the anterior splint was removed, and at the end of about three weeks the posterior splint was taken off, and adhesive tape was applied to the forearm and hand. This was left on for about two weeks, permitting some motion, but affording a certain amount of support. The patient recovered with a good degree of motion in all directions.—*Medical Record.*

MISCELLANEOUS NOTES.

In Spite of Teachers and Text-books.—The days of the cotton jacket and the linseed poultice seem to be past. Perhaps the applications valued most highly by medical teachers at this time are the cold ones, either in the form of ice-bags or cold compresses frequently changed. These when placed over the seat of disease, seem to give decided relief, to modify the temperature, and to hasten early resolution. But in spite of their advocacy in the text-books, the rank and file of the profession do not take to them kindly.

Antiphlogistine now enjoys perhaps greater popularity in the treatment of pneumonia and other acute respiratory diseases than any other local application. This popularity seems to be well-deserved. It may not modify the course of the disease to any great extent, but it certainly proves of the greatest comfort to the patient, and helps to ameliorate some of the troublesome symptoms which are characteristic of the disease. Antiphlogistine must therefore be considered a distinct addition to our therapeutic armamentarium.—*The Medical Standard*, March, 1904.

Pure-Food Inspection Law.—Dr. Harvey W. Wiley, under whom, as chief of the bureau of chemistry, of the Department of Agriculture, the inspection of all foods and wines imported into the United States must pass, recently reported as a result of such inspection that twenty samples, or about 10 per cent. of two hundred and five invoices examined, had been condemned.

Of these twenty samples five were of Rhine wine, and contained salicylic acid; two of white wine, Sauterne, and contained sulphurous acid; four of olive oil, containing cottonseed oil, and misbranded; three of frankfurter sausage, containing harmful preservatives; four of vegetables in cans, with lead tops touching the food; one of vinegar, misbranded and made from distilled alcohol, and one of coloring matter for foods, in which coal-tar dyes were used.

In view of the rigid methods of examination adopted under the new law, which condemns and excludes impure and misbranded foods and wines, it is pleasant to announce that Mariani's wine is found by careful analysis to be absolutely pure. Thus an additional recognition of merit is accorded this reliable preparation by an official endorsement of the United States Government. This excellent provision against the introduction of impure and adulterated foods is in conformity with similar stringent food laws operative in France, Germany, Russia and elsewhere abroad.—*The Coca Leaf*, November, 1903.

Dermapurine Soap.—Chicago, Nov. 1, 1899. Derma Remedy Co.: Gentlemen—Dermapurine Soap is the nearest to perfection for the bath and toilet of any soap I ever used. I can highly recommend it for infants and adults. I find its use renders and keeps the skin clear, clean and healthy.

S. M. FELMLEE, M.D.

Dermapurine Soap proved all you claim for it; it is a most efficient article for the toilet, both medicinal and otherwise.

LLOYD DORSEY, M.D., Kentland, Ind.

Sanmetto in Hematuria with Retention of Urine.—I prescribed Sanmetto in a case of hematuria with retention of urine. The patient had improved a great deal by the time another supply of Sanmetto reached me. I was obliged to withdraw the urine with a catheter for nearly a week, from three to four times in twenty-four hours, also had to wash out the bladder and use suction to withdraw the clots. Since using Sanmetto the urine passes again normally and the constituents are also nearly normal and the patient has fully recovered, with the exception of a small quantity of albumen. I shall prescribe Sanmetto in the future if cases for which it is indicated fall to my care for treatment. W. B. ERDMAN, M.D., Macungie, Pa.

Aural Congestion with Threatened Abscess.—By C. L. Steensen, A.M., M.D., Professor of Materia Medica, New York. Author: "Naso-Pharyngeal Disorders," etc. I would like to mention to my confreres that, in the treatment of acute attacks of aural congestion, with every indication of suppuration, both internal and external, and seriously jeopardizing the tympanum, and not infrequently with evidences of threatening abscess accompanied with the most lancinating pains, I have prescribed Antikamnia and Salol Tablets with most satisfactory results. The congestion, fever and pain promptly yield to the persistent use of these tablets, and to attain this I ordered two tablets to be given every two hours. I am firmly convinced that with careful ablation and syringing of the external aural cavity with a mild antiseptic and anodyne solution, and the administration of this remedy, I have aborted the threatened attack and thereby undoubtedly saved the patient from a suppurative sequela, and no doubt in many instances, from operative interference, necessitating the trephining of the sphenoid, or the opening of the antrum to save life. As every practitioner knows, the operation is not infrequently fatal, particularly if the case be an advanced one and the patient an aged one.

As to the local application, I simply resort to tepid water, to which may be added a mild antiseptic, say five grains boric acid to each ounce and a little tincture opium. This makes an admirable preparation. This solution carefully injected from two to four times daily to warm and cleanse the vestibule of the ear, and with the administration of Antikamnia and Salol Tablets, or Antikamnia and Codeine Tablets, the practitioner will be rewarded with most gratifying results.

Claims the Name.—Physicians' Defense Company brings suit. Seeks to enjoin Maryland Casualty Company from using the title in its business. The Physicians' Defense Co. of Fort Wayne, Ind., has instituted suit in the United States Circuit Court to restrain the Maryland Casualty Co., whose principal business is in Baltimore, from using the terms "Physicians' Defense Contract" or "Physicians' Defense Policy" in connection with its business. The use of these terms for the contract written and sold by the Maryland Casualty Co., is alleged in the bill of complaint to be an unnecessary and unlawful violation of the rights of the complainant and an interference with the good will of its business, which, if not restrained by an injunction of the court, will work irreparable injury to the complainant. It is also alleged in the bill of complaint that the value of the good-will and corporate title of the complainant and the name of its business contract greatly exceed \$10,000, and that \$2000 profits have been diverted from the complainant by the Maryland Casualty Co.

The Physicians' Defense Co., the complainant, the bill states, is a co-operative society formed by physicians and surgeons for the benefit

of physicians and surgeons. Then the bill continues: "It grew out of a realization on the part of its formers of the fact that every medical case and every surgical operation involved an inherent responsibility for the exercise of adequate skill and care; that it was of the highest importance that this responsibility should be maintained to the greatest extent, but at the same time that those physicians and surgeons who, with utmost skill and care practiced their noble profession, should be protected against the disappointments necessarily incident to the frailty of the human organism and the cupidity and spleen of evil-minded persons."

The bill of complaint then explains that the business of the company consists in maintaining a staff of lawyers and experts especially skilled in medical practice and in the trial of malpractice cases. For an annual sum it assumes entire charge and responsibility for the defense of all suits for malpractice which may be brought against the holders of its contracts.

The business of the complainant, it is stated, was an entirely new departure, and because it filled a long-felt want among the medical profession it soon became popular. To designate the identity and the business of the company the "Physicians' Defense Co." was adopted as its title, and its contract was given the title of "Physicians' Defense Contract."

The Maryland Casualty Co., it is alleged, in violation of the rights of the complainant and without legal warrant, has engaged in a business identical with that of the complainant, and is writing and selling a contract identical in phraseology with that of the complainant. This contract of the defendant, it is also alleged, is called "Physicians' Defense Contract" and "Physicians' Defense Policy," the same as the contract of the complainant.

The bill of complaint was sworn to by S. Canby Jenks, general agent of the complainant for Maryland, and was filed by Arthur Stuart, attorney.

NOTE—Physicians are requested to report to the Physicians' Defense Co. any cases which may come to their notice in which contracts or policies so-called issued by other companies have been sold or bought as and for the only genuine Physicians' Defense Contract of the Physicians' Defense Co. of Fort Wayne, Ind.

Vin Mariani.—Vin Mariani is a proprietary preparation only in name. It stands for originality and reliability, representing just what it is claimed to be. Perfection is attained under expert possibilities with machinery which is the outgrowth of long years of specialism confined exclusively to Coca products. Numerous endorsements, from physicians in various parts of the world who are using Vin Mariani in daily practice, praise its unique qualities as a tonic and restorer of nervous and muscular strength. Vin Mariani was used by the profession fully twenty years before cocaine was known in medicine. In fact, through this preparation physicians were made familiar with the properties of Coca, and this was the original and only available form of employing the remedy. The popularity of Vin Mariani has led imitators to foister upon the profession artificial substitutes concocted by adding cocaine to wine. Such base frauds masquerading as Coca Wine—a title originated by M. Mariani—have done great evil and tend to unjustly cause condemnation of all Coca preparations as but false products.

Hagee's Cordial of Cod Liver Oil in Summer.—There is still some difference of opinion among physicians as to whether the prepara-

tions of the active principles of cod liver oil fully replace the administration of the oil itself. There can, however, be no difference of opinion as to the superiority of these preparations during certain periods of the year. During the summer months especially we have found them of great use, for there is a marked loathness on the part of patients to take emulsion or preparations having an oily nature. Among these preparations we have found Hagee's Cordial of Cod Liver Oil one of the most satisfactory. It is exceedingly palatable, can be taken by those with the most delicate digestion, without any disturbance of the same, and its effects are rapidly observed.—*Colorado Medical Journal*.

ST. LOUIS Medical and Surgical Journal.

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VOLUME LXXXVI.—JUNE, 1904.—No. 6.

ORIGINAL COMMUNICATIONS.

FIFTEEN CASES OF EXTRA-GENITAL CHANCRE OBSERVED IN 1900, 1901, AND 1902.*

BY A. H. OHMANN-DUMESNIL, ST. LOUIS.

The subject of extra-genital chancre is one which always possesses a certain amount of interest for him who has occasion either to treat and observe cases of lues, or who reads the literature of the subject. It is not so many years ago that a case of extra-genital chancre was recorded as something almost extraordinary. To-day there is hardly a medical student who has not seen several demonstrated by his professor. And yet, when we take the rank and file of medical practitioners who have served their time as hospital internes under competent teachers, we find the majority in such a mental condition that they hesitate to formulate a diagnosis when the case presents itself in their private practice. This is very easily understood when we take into consideration that they now assume a responsibility all their own, and a misstep is apt to result in the loss of a practice which is just budding. We also have the family physician who suspects the true nature of the lesion, when an extra-genital chancre is presented, and yet hesitates to pronounce himself on account of the social standing of his patient, not deeming such a thing possible, and also from the fear that he might possibly be wrong and the statement of his diagnosis would result in his losing a very worthy and profitable family. Besides, the responsible members of such family might doubt him and even suspect his motives in telling what is really the truth.

*Read before the Missouri State Medical Association, May 17., 1904.

It is not the intention here to make a thorough review of the subject. The most complete and elaborate review of the subject so far published is beyond all doubt that which is contained in the classic work of L. D. Bulkley, "Syphilis Insonitum." Of course, this does not include the extra-genital chancres acquired in other but innocent ways. These latter are numerous enough, but for elaborate tables of such we must turn to French and German authors who seem to have greater facilities for their observation. It must not be forgotten that genital chancres are vastly more numerous than the extra-genital variety, which latter is frequently never seen by practitioners who observe many cases of the genital sort. To him who is a close observer and has opportunities of seeing many cases of syphilis, cases of extra-genital chancre come before him frequently enough. As the writer stated in a former paper: "A question of more than ordinary interest which arises in each one of these cases is, how did the infection occur? This at best is most difficult to answer, and many of the methods which have been published did more credit to the imaginations of the writers than as satisfactory reasons to their readers. At best these can only be surmises and inferences more ingenious than satisfactory; and it is only in a small proportion of cases that absolute certainty may be asserted in a given one. This inability to trace the source of the origin of the infection, however, detracts in no wise from the interest attaching to the peculiar site affected or the character of the lesion presented. In fact, it is the sum of these peculiarities which renders interesting a subject which, under other circumstances, might be considered commonplace."

With these few introductory remarks will be given the clinical records of fifteen cases seen in the three years succeeding the one in which twenty-five were seen. It may not be inappropriate to premise the matter by stating that the fifteen cases which will be outlined were all seen in private practice and no hospital cases are included in this record as were in the previous one. This is done for the purpose of giving a more adequate idea of what a physician is to expect in his practice.

1. Twenty-five cases of Extra-genital Chancre observed in 1897. 1898 and 1899. *St. Louis Medical and Surgical Journal*, Dec., 1900.

CASE 1.—A young man, aged 24, a mechanic by occupation, presented himself for treatment. He was dark haired, of rather spare build, but strong and with comparatively well developed muscles. Upon interrogation he stated that he had not recently had headache or suffered from any other subjective symptoms. He stated that his last intercourse had been on the 5th of the month and that he saw a chancre for the first time on the 26th. Upon examining him I found two chancres. Upon palpation there was no pain in either. One chancre was located on the left side of the prepuce, in the balano-preputial sulcus. It was markedly indurated, this latter being of the variety known as cartilaginous. The other chancre was situated on the left side of the lower lip. It was the size of a silver ten-cent piece and pressure did not elicit pain. When, however, tobacco came in contact with it, it produced the sensation of burning. This case was interesting not only on account of the extra-genital chancre, but also because it presented a typical example of what I denominated some years ago, chancre *a distance*. This variety I had occasion to elaborate upon some years ago.² No exact details were obtainable in this case beyond the fact that the patient was most probably infected by a prostitute who had mucous patches of the vagina and of the mouth.

CASE 2.—A young man, aged 24, occupation waiter, consulted me for a chancre on his prepuce, and in the course of the examination I found another chancre upon his right forefinger. He could give no details either in regard to the time of the incubation of the lesions or as to the probable manner in which the finger had been infected. He stated that he continually pressed the chancre with his right finger tip and then claimed that both the digital and preputial chancres appeared simultaneously. So that the entire history can be looked upon as incomplete and unsatisfactory. The chancres both had the cartilaginous induration and rapidly yielded to local treatment of bichloride solution applications.

CASE 3. This case was also one of double chancre in a young man, single, who was 30 years of age, and whose occupation was that of bricklayer. He confessed to me that he was

2. Double chancre *a distance*. St. Louis *Medical and Surgical Journal*, July, 1892.

of a very passionate nature, and when I first saw him he had a chancre on the upper part of the prepuce and one on the upper portion of his left upper lip. Here the chancre was large and encroached quite markedly upon the vermillion of the lip. The induration in both chancres was marked and of the cartilaginous form. As in Case 2, the submaxillary and inguinal adenitis was well marked. In fact, there could exist no doubt as to the nature of the lesions. The history was also very unsatisfactory in this case, and confrontation was impossible.

CASE 4.—A young married woman of 24, whose husband I was treating for syphilis, was brought to me by him. She presented a chancre of the size of a five-cent nickel piece on the mucous membrane of the lower right lip. In this case there was a more satisfactory history than in many of the others, although it was deficient in the fact that no exact dates could be given. The man, who had mucous patches of the tongue, lips and mouth, stated that he had frequently kissed his wife and that there is no doubt that this was the cause of her infection; for his penis was free of any lesions and she presented none of her genitalia. She subsequently developed a secondary eruption in the form of a roseola, shortly followed by a small, papular syphilide which rapidly gave way under the influence of protiodide of mercury.

CASE 5.—A young unmarried woman of 25, without any occupation, came to see me on account of an intractable sore throat which no one seemed to be able to treat satisfactorily. I found, upon interrogation, that she was the mistress of a man who I knew had contracted syphilis. The patient did not present any marked eruption, but complained of painful enlarged lymphatic ganglia on the right side of the neck which interfered very much with deglutition even of liquids. Upon examining her throat, I found a chancre upon the right side of the pharynx directly posterior to the pillar of the fauces. The chancre was about an inch long and a little less than half an inch wide. It was not sensitive to a direct touch, but such action awakened a reflex cough. The mucosa was markedly congested and the induration was very perceptible. The edges of the chancre were sharp cut and distinct and projected above the level of the mucous membrane. Under internal and local mercurial treat-

ment rapid amelioration set in, and treatment was soon discontinued by the patient. There could no explanation be elicited from the patient in regard to the manner in which the infection occurred, and it will probably always remain unexplained.

CASE 6.—This case was a male infant of nine months, whose mother was referred to me by a physician. The mother could only make the one statement that she had observed a "sore" upon the child's buttock and had tried some home remedies upon it without success. The same results obtained with all the methods suggested by women friends and neighbors. She then determined to consult a physician and he, not recognizing the nature of the lesion, had the same want of success in his treatment. It was then that he referred the case to me. When presented there existed upon the right buttock a crustaceous lesion, circular in shape, about one and a half inches in diameter. There was marked induration about its periphery and at the base. It was not painful and its general appearance suggested a chancre. The child was pale and anemic and a general condition of malnutrition was present. A slight maculo-papular eruption could be seen upon the abdomen and chest. Under these circumstances the diagnosis of chancre was made and mercurial inunctions ordered. The child immediately began to improve; it took kindly to the bottle and in a few months it presented the picture of health. The mother never could explain the manner in which the infection could have occurred despite all the suggestions that were made. She herself was not syphilitic, nor was her husband, and the arm or cheek of a syphilitic bearing a lesion and coming in contact with the child's buttock was the only plausible explanation that suggested itself.

CASE 7.—The patient was a young man, about 24 years of age, who was inclined to run after women. When referred to me by a physician, he presented a well marked chancre of the upper lip on the left side. He did not suspect the nature of his trouble until he was told what it was. No knowledge of the woman from whom it might have been contracted could be elicited from him. In fact, he claimed complete ignorance and he had no reason for this, for he placed himself under treatment directly he was informed of the nature of his trouble.

He had marked induration of the lymphatic glands of the left side of his throat and neck, and in a very short time he showed a small papular syphilide. He acknowledged to kissing, but denied having been bitten, and no other possible cause but the former could be invoked. As in the case of a large number of extra-genital chancres, it was not possible to assign any definite cause for the infection beyond a reasonable surmise, which, in all probability was the true explanation of the manner in which the infective inoculation had taken place.

CASE 8.—This was a case which was most interesting. The patient, a single man of 45 years, pleaded guilty of having taken into his mouth the tongue of a woman with whom he had sexual intercourse. At the time he presented himself he had a large, markedly indurated chancre under the under surface of the tongue on the right side. The lymphatic glands of that side were markedly enlarged and indurated. So great was this enlargement that the deglutition of solid food was an impossibility. At this time pressure upon the glands to the tongue elicited no pain. The patient was very actively treated with mercurials locally and internally, and for a certain length of time there was apparent improvement. After this pain of a very marked character was felt, the tongue enlarged very much and speech was an impossibility. A thorough examination revealed the fact that carcinoma had declared itself, and it ravaged the tissues in a very destructive manner. The malignant process was the precursor of the patient's death. I will not discuss the engrafting of a carcinomatous process upon syphilitic tissues in this place, but reserve it for some future paper.

CASE 9.—This case was that of a physician, 46 years of age, married, who had a lesion on the right forefinger which he had mistaken for an X-ray burn. He found it to be very intractable to treatment, and at first attributed this to the supposed nature of the lesion. As is well known, burns produced by the Roentgen ray are stubborn to the generally accepted modes of treatment for burns. The lesion which had caused him so much trouble was a rather large fungating chancre. The induration was well marked and some pain upon pressure existed. This latter was no doubt due to the treatment which had been used, including as it did, poulticing and strong anti-

septics, not mercurial in nature. When the diagnosis was announced the patient refused to accept it, as he could not recall a circumstance connected with a possible infection. And yet there was marked induration of the lymphatic ganglia of the arm and axilla. The patient felt convinced finally when a maculo-pustular syphilide made its appearance upon his chest and shortly afterwards involved his arms, back and thighs. Energetic treatment prevented the appearance of any more syphilides.

CASE 10.—This case was that of another physician, single, and 34 years old. He is enthusiastic in the practice of gynecology and has always argued in favor of digital examination in the diagnosis of the diseased uterus as against the use of the vaginal speculum. He presented himself with a well marked chancre of the right forefinger. He immediately referred this accident to a certain one of his patients whom he had examined by the digital method, and subsequently found to be syphilitic. The chancre in his case was a dry crustaceous lesion, without pain, but persistent. The lymphatic glands of the arm and of the axilla presented a classic induration, and the patient immediately recognized the exactness of the diagnosis. A very slight eruption appeared shortly afterward and promptly yielded to treatment.

CASE 11.—This case was that of a young unmarried man of 22. He was referred to me by a physician who had made a correct diagnosis. Previously to that the patient had been treated for epithelioma, the primary lesion having been mistaken for a malignant one. When seen by the writer he had a typical chancre of the upper lip on the left side. He very frankly acknowledged that he thought he had been infected by a kiss. The accompanying adenitis was marked and easily defined. At the time of examination there existed confirmatory signs in the shape of mucous patches of the buccal cavity and a slight papular syphilide of the chest. The patient readily yielded to treatment, and there was a rapid disappearance of all objective signs.

CASE 12.—This case is one in which the patient could give a pretty fair history. He was a young German, not very long in this country, and without money or occupation. Being unmarried and about 23 years of age, he fell an easy victim to the wiles

of a prostitute. He was not content with sexual intercourse, but sought to satisfy his libidinous desires still further by inserting his finger in her vagina. When examined he presented a chancre of the glans, located on the left side, and in addition a primary lesion on the right index finger on the radial side and implicating the distal phalanx. The induration was marked and there was a fungating tendency about the lesion.

CASE 13.—This was a Russian of 33, a teamster by occupation. His parents were Russians and he gave a good family history. Upon being interrogated, he stated that he had the habit of introducing his finger into the vagina of a woman with whom he had frequent intercourse. The sore of which he complained first appeared at the distal joint of his right forefinger. The patient described it as a white spot which felt like a bullet set in the skin. It broke out at the second joint on the palmar surface of the finger and spread over the whole finger. There was no very marked induration of the chancre, it being of the parchment variety in the distal phalanx. That on the palmar surface had a cartilaginous induration, and the case was really one of double chancre of the finger. So far as involvement of the lymphatic glands was concerned, there was a marked induration of the right epitrochlear gland, but none of the other lymphatic ganglia. This case is sufficiently interesting to receive independent treatment in a paper especially devoted to it.

CASE 14.—This was an unmarried female, 18 years old, who is stout and physically strong. She lived at home with her parents. Her father evidently acquired syphilis, as her brother, several years her junior, had prenatal syphilis. The patient under consideration as well as two older sisters, were born before the father had syphilis. They are both healthy and non-luetic. The patient under consideration, when seen, complained of headache and sore throat, as well as of an eruption. On examination there was found a chancre in the centre of the upper lip, accompanied by double submaxillary adenitis. A papulo-pustular eruption existed on the face, as well as on the body, arms and thighs. The other lymphatic glands which were indurated, in addition to those mentioned, were the cervical, pre-auriculars and both epitrochlear. Efforts to arrive at a clear history of the manner of infection only resulted in an in-

ferential conclusion. By dint of questioning the avowal was made that she had been kissed on several occasions by a young man who, from the description furnished, was syphilitic.

CASE 15.—This patient was a single young man of 24, a Jew, who presented himself with a chancre of the upper lip, very near the centre. The induration in the lesion was a marked one, although not to the extent of being cartilaginous. He stated that the woman from whom he had most probably derived the infection had been repeatedly kissed by him and complained of having a sore mouth. This would certainly be sufficient to establish the origin of the chancre. The submaxillary glands were indurated and the pre-auricular on one side. In addition to this, there existed a rather discrete small papular syphilide on the chest. The remainder of the integument was clear of any eruption. Some headache and a few slight pains in the joints existed.

ANALYSIS.

If we take all the cases which have been reported they can be easily tabulated as follows:

Chancre of lip alone.....	8
Chancre of lip and glans.....	2
Chancre of finger.....	1
Chancre of buttock.....	1
Chancre of pharynx.....	1

13

From this we find that the location of the majority of these extra-genital chancres was the lip. Another interesting circumstance in connection with this is that it was the upper lip that was involved. In fact, it seems to be the universal experience of all syphilographers to observe the large majority of extra-genital chancres on the lip. In the present small series it was always the upper lip that was the seat of the chancre.

Next in order of frequency was the finger. Here, in the present list of cases, it was the right index that was involved, and in all of the cases there was not a simple, single chancre. An interesting case is that in which two chancres were found involving the finger.

In two instances unusual locations were each one the site of the primary lesion. One was the pharynx, which is compara-

tively unusual, but not rare. The other was that in which the buttock was the portion on which a chancre was observed. This is certainly a very unusual location, and there are but very few cases on record. Those who have devoted much time to the collection of histories of extra-genital chancres in many instances do not mention this location.

A circumstance which should be noted is that in every instance there existed corroborative signs, making the diagnosis a certain one. So many errors are liable to be made in the diagnosis of the chancre that all such evidence must be sought in order to make an expression of opinion certain and beyond all doubt. This was done in all of the cases detailed above, and cases of chancre redux were very carefully eliminated.

One very interesting point in connection with these cases is that there were found five cases of double chancre *a distance*. This is a rather uncommon condition and the finding of this variety in one-third of the total number of cases of extra-genital chancres observed is, to say the least, rather surprising. In fact, it would lead to the thought that this is a comparatively frequent occurrence. And, yet, syphilographers either omit all mention of this form, merely mention it, or have but one or two cases to briefly report. Another very unusual case given above is that of two concurrent chancres of a finger, one on the dorsal and the other on the palmar side. This form of infection has not been spoken of by writers on syphilis, to any noticeable degree.

To refer to the deontology of the cases reported, it was found that five cases were examples of syphilis insontium, or syphilis of the innocent. Two chancres of the lip were acquired innocently and were in females. Two of the finger occurred on the forefinger in physicians who were accidentally inoculated by patients. One of the buttock was in an infant who was inoculated in an unknown manner. The other ten cases were infected through sexual intercourse and were simply unexpected reminders of libidinous passion on the part of their carriers. So that we are led to the conclusion that only one-third of the cases were innocent and the remaining two-thirds were due to depravity. In a former series of twenty-five cases which I reported³ there were 48 per cent. (12 cases), a smaller percentage than in the present.

3. *Loc. cit.*

The reporting of these cases has not been made with the intention of adding to the long list of medical curiosities, but rather to call attention to the fact that chancres not only exist in unexpected localities, but that when a case of recently developed syphilis is seen diligent search should be made for the chancre and it should be found. If the writer has succeeded in doing this, a part of his object has been attained.

SYMPOSIUM OF SYPHILIS.

THE CUTANEOUS MANIFESTATIONS OF SYPHILIS.*

BY JAY F. SCHAMBERG, M.D., PHILADELPHIA, PA.

Dr. Schamberg illustrated his remarks with lantern slides exhibiting the various forms of syphilides and other eruptions apt to be confounded with them.

The cutaneous manifestations of syphilis possess certain characteristics which make them readily recognizable in the vast majority of cases. In exceptional instances the nature of the disease may be obscured as a result of deviation from the normal types. Error may occur, too, from the protean character of syphilis and its ability to closely simulate non-specific eruptions. Indeed, so far as cutaneous medicine is concerned, syphilis is the greatest of all imitators. At times this disease may produce eruptions so strongly resembling psoriasis, lupus, epithelioma, eczema, smallpox, etc., that experienced observers may be deceived. Under ordinary circumstances, however, the features of syphilitic dermatoses are clear enough to permit of a positive and unequivocal diagnosis.

As a general rule it may be stated that syphilides do not give rise to *itching*. This assertion will hold good for the vast majority of cases, but it is subject to occasional exceptions. During the rapid evolution of early syphilides some irritation of the skin may be present, but it is slight and usually of short duration. I have, however, occasionally noted severe itching in miliary papular and pustular eruptions which were scaling considerably. The absence of itching is one point in favor of a skin lesion being luetic.

*Read before the Philadelphia County Medical Society, March 9, 1904.

The *color* of syphilitic lesions often aids in the diagnosis. It must be remembered that the characteristic tint is often not observed in the very beginning. Indeed, the early macular and papular eruptions upon their first appearance are often pinkish-red or bright red; soon, however the vivid redness fades and a dull-red color takes its place. Later on, a brownish-red tone is acquired; in some cases the lesions may be raw-ham or copper colored. As the eruption fades out a well-pronounced brownish pigmentation remains. In general terms it may be said that the color of syphilitic eruptions is decidedly less vivid than that of simple dermatoses of the same type.

A common feature of syphilis is the presence upon the skin of a variety of lesions in different stages of development. This *polymorphism* is a feature of considerable diagnostic import. It is due to the slow appearance of the eruption, the different ages of the lesions and the tendency of some to relapse. For instance, papules, pustules, squamous patches and moist papules may be present at the same time.

Some syphilitic eruptions tend to assume a *circular form*. this is particularly true of the small papular lesions and of the recurrent erythematous rashes. The annulopapular syphilide is much more common in negroes than in whites.

The early eruptions, the so-called secondaries, are usually macular, papular or pustular. (The vesicular syphilide is extremely rare.) They are bilateral, generalized over the body, superficial and do not, as rule, tend to deep destruction. The late or so-called tertiary eruptions are the tubercular, ulcerative or gummatous varieties. They are usually asymmetrical, circumscribed and deep seated with a tendency to deep destruction of the soft tissues. A peculiarity of the tubercular or nodular eruptions is the frequent tendency to form circular, segmented or horseshoe-shaped patches. This configuration often lends material aid in the diagnosis.

Tertiary patches may occur anywhere, but are most commonly seen about the face, on the palms and soles and occasionally about the elbows and knees. They pursue an indolent course; often, however, they ulcerate and show but little tendency to spontaneous disappearance.

In the diagnosis of an early syphilitic eruption one may be assisted by attention to the history and the associated mani-

festations, such as the presence or remains of the initial lesion, generalized glandular enlargement, tonsillar ulceration, mucous patches in the mouth, alopecia, iritis, pains in the muscles, joints or bones, anemia, etc.

In the diagnosis of tertiary lesions one may be aided, apart from the eruption itself by the history, scars of previous cutaneous outbreaks and evidence of former destructive involvement of the soft palate.

The influence of mercury and the iodids upon the existing lesions is a valuable test in doubtful cases. It must be remembered, however, in the application of the therapeutic test, that these remedies are often of considerable value in certain other dermatoses. Mercury acts most favorably in some cases of lichen planus and the iodids give gratifying results in yeast infection of the skin (blastomycosis), actinomycosis and in some cases of psoriasis.

In the diagnosis of cutaneous syphilis too much stress must not be attached to the presence or the absence of any one feature; the composite symptomatology must be studied and conclusions carefully drawn.

VISCERAL SYPHILIS.*

BY JOHN M. SWAN, M.D., PHILADELPHIA, PA.

In 1894 Musser¹ read a paper before the Association of American Physicians in which he considered the progressive diminution in the number of cases of syphilis and the mild character of the disease. He concluded that tertiary manifestations are not common and that visceral syphilis is rare. He based these conclusions on the statistics of the Philadelphia Hospital and the Presbyterian Hospital. In the latter institution, out of nine thousand cases there are records of two cases of hepatic syphilis and four of laryngopharyngeal syphilis only. I do not include the brain and cord lesions, which will be considered later by Dr. Burr. This rarity of visceral syphilis at the present time would seem to be confirmed by the evidence obtained by consulting the records of the Pathological Society of Philadelphia.² Since its foundation in 1857, speci-

*Read before the Philadelphia County Medical Society, March 9, 1904.

mens from only seven cases of visceral syphilis have been shown at its meetings; five cases of syphilis of the liver, one case of syphilis of the kidneys and one case of the pancreas. It is apparent, therefore, that one physician will see very few cases of visceral syphilis, even when he has the complete clinical facilities at his command which are offered by our hospitals.

THE LUNGS.—Syphilis of the lung is probably not so rare a condition as might be supposed. According to Aufrecht,³ pulmonary syphilis may be due to the formation of gummata or to true inflammatory conditions affecting the connective tissue or the parenchyma. The literature of the subject is thoroughly reviewed by the author just mentioned and by Stengel.⁴ The studies of the many observers quoted by these writers seem to prove that diffuse pneumonic disease due to syphilis does exist. Whether or not there is a syphilitic disease of the lung that closely resembles tuberculosis in its clinical manifestations there is some difference of opinion. Osler⁵ says that if this disease exist, he has no personal knowledge of it. Stengel's review of pulmonary syphilis, however, was prompted by the observation of a case in his wards at the Philadelphia Hospital in which the course of the disease very closely resembled that of pulmonary tuberculosis; and Berg¹⁸ is of the opinion that a syphilitic lesion of the bronchi or the blood vessels may be the exciting cause of pulmonary tuberculosis. He also believes that pulmonary syphilis complicated by tuberculosis is a more frequent condition than is generally believed. Furthermore, Winfield²¹ reported a case of pulmonary syphilis in 1902 that had been diagnosed pulmonary tuberculosis and treated as such by a number of New York physicians. In considering the possibility of such a condition the diagnostician must always bear in mind that a tuberculous patient may become infected with syphilis and that a syphilitic subject may develop tuberculosis, whether or not one disease predisposes to the other. Carlier⁶ unhesitatingly says, after a study of seventy-five cases of syphilis of the lung, that the gummatous form of pulmonary syphilis sometimes affects a dangerous resemblance to tuberculosis so that the microscope cannot make a differential diagnosis. The latter portion of this statement may be challenged.

The clinical manifestations of syphilis of the lung are, ac-

according to all observers, as a rule, apparent in the right lung and in the middle lobe of that organ. The physical signs are those of a lobar pneumonia or a chronic, fibrous hyperplastic consolidation. They consist of dullness, bronchial breathing, crepitant râles and subcrepitant râles in the interscapular region as far as the base of the right scapula and anteriorly in the second and third right interspaces near the sternum. When, however, the process is one of slow growth of connective tissue of the lung, these signs will not be present over the entire area until late in the course of the disease; so that dullness posteriorly may be accompanied by tympany anteriorly and the breath sounds may be weakened or absent over some part of the affected area.

The symptoms are those of chronic pulmonary disease in general. Cough is usually present, though of variable intensity. Dyspnea is frequently the most marked feature, as in a case of Aufrecht's. There is usually some expectoration, though it may be scanty, microscopic examination of which gives no positive evidence. Cases have been reported in which the sputum contained elastic fibers. Hemorrhage is rare and emaciation is not marked. The writers on this subject differ in their records of the temperature. Stengel published the chart of a patient in the Philadelphia Hospital which shows a febrile reaction with a maximum at noon or early in the afternoon. Probably there is always a more or less well-marked rise of temperature at some stage of the disease.

While the middle lobe of the right lung is the one usually affected by syphilitic disease, areas of consolidation may be found elsewhere. How shall we make a diagnosis in the case of a syphilitic individual who presents the symptoms and signs of pulmonary disease at an apex? Probably the persistent absence of tubercle bacilli from the sputum is the most dependable feature. This fact, in addition to unmistakable evidences of syphilis in organs, such as the liver, the bones or the eye, for which the syphilitic virus has a notable predilection, and an atypical symptomatology will point strongly to syphilis as the cause of the lung disease. It will also indicate antisyphilitic treatment. If, in a suspected case of pulmonary syphilis, mercurial or mixed treatment aggravate the symptoms, the treatment should be immediately discontinued.

THE STOMACH.—Syphilis may produce hemorrhagic erosions, ulcers and tumors in the stomach; it may result in stenosis of the pylorus; it may give rise to a symptom-complex exactly similar to gastralgia (Stockton¹²) and, according to Fenwick,⁹ it may set up chronic inflammation of the mucous membrane of the stomach.

Clinically, we may assume that syphilitic disease of the stomach commonly results in a train of symptoms that may be mistaken for gastric carcinoma, gastric ulcer or chronic gastritis.

Syphilitic tumor of the stomach is the result of the development of a gumma in the organ. Einhorn,⁷ reported two such cases in 1900 and a third in 1902. The last patient presented signs very suggestive of gastric carcinoma, but the symptoms were relieved and the tumor entirely disappeared on antisyphilitic treatment. In two of Einhorn's cases symptoms of stenosis of the pylorus were encountered which were relieved by the institution of mercurial treatment.

Syphilitic ulcer of the stomach is probably usually the result of the breaking down of a small gumma. The symptoms are those of a simple peptic ulcer. Indeed, a patient whose case was reported by Dieulafoy¹¹ in 1898 had resisted the routine treatment for simple peptic ulcer so long that he was about to be operated on, when the discovery of some old syphilitic cicatrices on his legs determined a trial of mercurial therapy. The institution of subcutaneous injections of mercury biniodid accompanied by potassium iodid was followed by cure. According to Fenwick, who has studied these cases clinically, pain is invariably present, usually in the epigastrium, and appears about one-half hour after taking food. When the disease is advanced, the pain is often most intense during the night and has been mistaken for the pain of a gastric crisis of locomotor ataxia. Vomiting is a conspicuous feature; at first the patient vomits only after his painful attacks, but later, as the accompanying gastritis extends, he may vomit after every meal. Hemorrhage is rare, although in the case reported by Dieulafoy and already referred to, hematemesis was a conspicuous symptom, and in another case of syphilitic gastritis reported by him in 1902 profuse hemorrhages from the stomach were noted. In the early stages of the disease free hydrochloric

acid may usually be found after a test meal, and in those cases in which nocturnal attacks of pain are present the vomitus contains an excess of hydrochloric acid. When the disease is advanced, there is usually evidence of lactic acid fermentation. Perforation may occur, as in a case reported by Flexner¹⁰ and one by Caesaris-Demel.⁸ Other cases of syphilis of the stomach simulating gastric ulcer have been reported by Einhorn. Flexner, in addition to his own case, collected thirteen cases of gastric syphilis from the literature confirmed by necropsy and histologic studies, and one case of probable gastric syphilis not absolutely proved.

Syphilitic gastritis has been studied by Fenwick, who reaches the conclusion that there can be no doubt that there is such a disorder. The disease presents the ordinary phenomena of chronic gastritis from other causes, but presents the distinguishing feature of intractability to ordinary treatment.

A negro male, aged thirty-nine years, presented himself at the Polyclinic Hospital, October 19, 1903, in the service of Dr. Daland. He complained of pain in the pit of his stomach. He was suffering from an iritis for which he was being treated in Dr. Hansell's clinic. He gave a history of a venereal sore when he was twenty years of age; he was married at the age of twenty-four, and his wife, who had never been delivered of a living child, had had eight or ten miscarriages, usually at about the third month. The pain in the stomach of which this patient complained began about a week before he was first seen. It was of the nature of a dull, almost constant ache. He was nauseated, but did not vomit. He presented bilateral, painless enlargement of the superficial lymph nodes and signs of consolidation at the right apex. A physical examination of his epigastrium was without result.

At that time I believed that the gastric symptoms and the physical signs in the right lung were due to syphilitic disease of those organs. As the patient had no expectoration, it was impossible to exclude tuberculosis of the lungs. The gastric symptoms, however, rapidly lessened and finally disappeared under mercurial treatment. It seems to me that if this were a case of gastritis in a syphilitic, the mercury would have aggravated the gastric symptoms rather than have relieved them.

In 1901 I saw a child, aged eleven months, the offspring of

a syphilitic father. The child was born at term, but had always been sickly. At the age of three months he had an attack which was diagnosed congestion of the lungs, and during his fifth and sixth months he suffered from an attack of infantile scurvy. For a week before I first saw him he had been vomiting, had abdominal pain and was constipated; but this last symptom was soon replaced by diarrhea; there was some fever. The attack resisted the usual measures adopted in treating gastrointestinal conditions in improperly fed children until he was put on mercurial treatment, when he improved rapidly. The child had a second attack, similar to the first, about one year later, when mercurials were again followed by relief of the symptoms.

Since my experience with this child, I have seen two cases in the dispensary of the Presbyterian Hospital in which mercurial treatment was followed by marked improvement in the marasmic children of syphilitic parents.

In the diagnosis of syphilitic disease of the stomach we must remember that there is no reason why a syphilitic subject should not have a carcinoma of his stomach, should not have a simple peptic ulcer, or that he should not contract a gastritis from some cause independent of his syphilitic disease. In fact, there are in many cases good reasons why a syphilitic should contract gastric inflammatory conditions. After due consideration has been given to the etiologic factors other than the specific disease, gastric syphilis may be diagnosed (1) after demonstrating the existence of a previous syphilitic infection; (2) when there is evidence of tertiary lesions in other organs; (3) by the resistance of the symptoms to ordinary treatment, and (4) by improvement and cure following antisyphilitic treatment.

Dieulafoy says that no one symptom points conclusively to gastric syphilis, but that the symptoms of gastric ulcer in a syphilitic should lead to the supposition that the gastric disease is due to the constitutional disturbance. He also says that one should never forget to search for syphilis in the previous history of a patient presenting the symptoms of simple peptic ulcer.

THE KIDNEYS.—Syphilis sometimes results in the development of gummata in the kidneys during the tertiary stage of

the disease. During the secondary stage of the disease cases are occasionally noted in which a true inflammation develops. This inflammation, according to Karvonen,¹⁹ may be (1) an acute syphilitic nephritis; (2) a chronic diffuse nephritis, or (3) a chronic indurative and cicatricial nephritis. These nephritides are marked by the usual signs of renal inflammation; the appearance of albuminuria with hyaline, epithelial and blood casts, fever, edema, anemia, etc.

In a given case of nephritis supposed to be due to syphilis, before a positive diagnosis can be made, the physician should know that the patient was not a subject of renal disease before he acquired his syphilitic infection. The diagnostician ought to be able to show that none of the ordinary etiologic factors of nephritis, such as alcohol, is active in the case under consideration; a requirement that presents great difficulty. The symptoms of renal disease should disappear promptly upon the institution of antisyphilitic treatment. Chauffard and Gouraud¹³ hold the view that cases of syphilitic nephritis are characterized by an exceptionally high degree of albuminuria, in their patient fifty-five grams to the liter. Other cases of syphilitic nephritis have also shown a high percentage of albumin: a case reported by Hoffman and Salkowski¹⁴ showed seven per cent. of albumin; one reported by Ferras¹⁵ gave 2.66 per cent. (40 grams in 1500 cc. urine); one reported by Waldvogel²⁰ gave 9 grams to the liter, 13.5 grams to 1500 cc. and 7.5 grams to 2500 cc. on three different occasions; one reported by Stepler¹⁷ gave 1.2 per cent. of albumin.

In the diagnosis of nephritis due to syphilis, account must be taken of cases in which skin eruptions have been erroneously diagnosed and the energetic administration of mercurials has set up a renal inflammation, as in a case recently studied by the writer.¹⁶ In such cases mercury can be demonstrated in the urine.

THE LIVER.—The liver is probably more frequently the seat of syphilitic lesions than any of the other organs; at least, syphilis of the liver is more frequently diagnosed than syphilis of the other viscera.

From the pathologic viewpoint, the disease may be diffuse (syphilitic cirrhosis) or circumscribed (gumma of the liver).

Clinically, syphilis manifests itself by the production of

icterus in the early secondary stage and by the production of cirrhosis and of gummata in the tertiary stage.

The symptoms of syphilitic icterus differ from those of simple catarrhal jaundice by the absence of the accompanying gastrointestinal symptoms, although the stools are, as a rule, clay colored. The usual etiologic factors, such as dietetic errors and exposure to cold, are also absent. The icterus is said by Lancereaux to be due to the pressure of the enlarged lymph nodes at the transverse fissure of the liver on the bile ducts. This view is accepted by Quincke and Hoppe-Seyler.²³ The diagnosis is made by the simultaneous occurrence of the secondary lesions of syphilis, the absence of gastrointestinal symptoms and the influence of antisyphilitic treatment.

The symptoms of syphilitic cirrhosis of the liver differ somewhat from those of alcoholic cirrhosis. According to Marcuse,²² pain in the hepatic region is the most constant symptom, the liver is usually enlarged, ascites and general anasarca appear, but icterus from compression of the bile ducts is rare. The beginning of the disease is attended by gastrointestinal disturbances in two-thirds of the cases.

The enlargement of the liver in syphilitic cirrhosis seems to be one of the principal diagnostic points, and Osler lays great stress on the extreme irregularity of the organ, as revealed by palpation. A history of syphilitic infection and the existence of syphilitic lesions in other organs will aid the diagnosis.

Gumma of the liver may exist without producing symptoms, but occasionally a superficial gumma may be mistaken for carcinoma of the liver, or a deep gumma may, by its growth, so isolate a portion of the liver substance that a resemblance to malignant disease is produced. Marcuse and Quincke and Hoppe-Seyler claim that the co-existence of splenic enlargement and albuminuria point to gumma; the first writer maintaining that these signs are never found in cases of carcinoma. The patient with syphilitic disease of the liver often has periods of retrogression of symptoms during which he feels comparatively well; but soon the symptoms reappear in force. Such a history is very suggestive of syphilis of the liver. In this as in the other conditions already referred to, the history of infection with syphilis and the existence of syphilitic lesions in other organs aid in the diagnosis.

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 SYPHILIS OF THE NERVOUS SYSTEM.*

BY CHARLES W. BURR, M.D., PHILADELPHIA, PA.

It is impossible in a twenty-minute paper to attempt any thorough study of nervous syphilis. All that can be done is to consider a few points in diagnosis and make some remarks on treatment.

There is no symptom or group of symptoms pathognomonic of syphilitic infection of the nervous system. There are groups of symptoms which occur so frequently and are so rarely due to other causes that their presence creates strong presumptive evidence; but the diagnosis can rarely be made with surety of correctness in the absence of other evidence or of the therapeutic test or unless the case be watched for quite a long period. A diagnosis made at the first visit, and based on the symptoms then present alone without a knowledge of the past medical history of the patient and the previous course of the disease, indicates, as a rule, careless thinking rather than skill.

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It is often forgotten that syphilis does not protect against other diseases and that because a man has had a chancre it does not necessarily follow that his present trouble is syphilitic.

It is not so much the symptoms themselves that are of value in diagnosis as the way they are grouped together and their course; the way they successively appear. One great characteristic is multiplicity, that is, the appearance of symptoms, it may be almost simultaneously or in rapid or slow succession, which need for their production widely scattered lesions. The morbid anatomy of the disease explains this. It never attacks exclusively one small area of the brain or cord, is never strictly local, but always more or less generalized. Its first gross lesions are always in the bloodvessel walls or in the membranes of the cord and brain. It never attacks one arterial branch to the exclusion of all others, but many at the same time. The disease may progress so rapidly in one spot as to produce such marked local symptoms that others may be overlooked, but if sought for they will be found. This is true even at an apparently early period of the disease, apparently early only, because symptoms have already appeared of which the patient can have no personal knowledge. For example, it is not infrequent after some sudden and striking brain lesion to find on examination aberrant pupillary reactions or disturbances of the reflexes of the legs which must have antedated the present condition, but which gave the patient no trouble and of which he was ignorant. Though the lesions are always widespread there are particular regions which are apt to be most affected and to cause the first striking symptoms. One of the commonest seats is the membrane at the base of the brain. As a result of this the cranial nerves, especially the motor nerves of the eyes, are apt to be affected very early. Given a case of binasal hemianopsia in which the course of the symptoms does not indicate disease of the pituitary body, the most likely cause is a specific meningitis in the region of the optic chiasm. Hemiplegia with oculomotor palsy on the opposite side indicates but does not prove syphilitic disease in the region of the crus. Left-sided hemiplegia with aphasia in a right-handed man does not mean that the speech centers are not in the left brain, but that there are multiple foci of disease, probably syphilitic.

In a strict sense syphilis never attacks exclusively the brain or the cord alone; both are always affected. The morbid process may, however, be so much more severe in one organ as to cause the symptoms referable to the other to be overlooked. The most nearly characteristic type of spinal syphilis is that described by Erb. It begins with a slowly increasing weakness and stiffness of the legs, frequently associated with paresthesias. Vaguely localized girdle sensations are complained of often. There may be hyperesthesia or actual pain in various parts of the body. Serious objective disturbances of sensibility do not occur. Weakness of the detrusor is a frequent bladder symptom. Constipation is frequent, rectal incontinence rare. Progressive sexual weakness often occurs. The final picture is that of a spastic paraplegia. Notwithstanding the spastic gait the muscle tension is low. The kneejerks are increased and ankle clonus is present. Bed sores are rare. Unfortunately this group of symptoms may arise from other causes, and syphilis may cause other symptoms. The safest rule for therapeutic purposes is to regard any case not showing the signs of distinct system disease, but due to a meningomyelitis as specific. It is gravely doubtful if a pure acute myelitis is ever syphilitic. There is, however, a difference of opinion among men competent to judge in this matter.

It is often important to determine the cause of epileptiform convulsions. True idiopathic epilepsy rarely begins after the thirty-fifth year, and given epileptiform convulsions beginning after that age without other symptoms of brain tumor or without some other manifest cause it is best to put the patient to the therapeutic test. The presence of the general symptoms of tumor, headache, vertigo, vomiting and choked disc, does not of course exclude syphilis, because a gumma may cause all of them. A syphilitic new growth is, however, apt to have associated with it symptoms due to meningitis or vascular disease in other regions of the brain; whereas in other tumors the symptoms are always, except in the rare case of multiple growths, referable to disease in one area alone.

A second characteristic of syphilis is the fleeting nature of certain symptoms. Transient palsies, hemiplegic, monoplegic or of the cranial nerves, aphasia and apoplectic or epilepti-

form attacks are common. They are most frequently due to variations of the blood supply caused by disease of the vessels, but it is more than probable that sometimes they are the result of a toxin acting locally.

Syphilis may not only produce serious organic disease, but also cause a secondary neurasthenia in the proper sense of that much abused word. At a time when there is no evidence of any organic disease in active progress the patient may show all the signs of profound and apparently causeless neurasthenia. Physical weakness, mental tire, disordered digestion, leaky skin, emaciation, troubled sleep and emotionalism may all be present. The diagnosis cannot be made unless the history is known or there is evidence of an antecedent chancre or some organic manifestation appears. This condition is most apt to occur between the time of the disappearance of the secondary skin lesions and the appearance of tertiary visceral disease. It is important to remember the possibility of its existence when treating young men who, previously robust, have become causelessly weak. As a rule, treatment gives excellent results.

Finally I shall encroach a little on the domain of Dr. Christian and say a few words about therapeutics. Of course the two drugs which have any direct effect upon the specific process are potassium iodid and mercury. It is to be remembered, however, that in cases at all advanced there are present not only the new formed specific granulations, but necrotic, sclerosed or degenerated areas. Treatment will not affect these. Given, for example, the case of an old hemiplegic with thrombotic softening it is useless to fill him with physic in the hope that absorption will occur and new brain cells be created out of nothingness. Given a sclerosed and atrophied spinal cord, with nerve cells and fibres replaced by dense connective tissue, specific treatment will do no good. It may do harm. We all of us have seen old syphilitics suffering, not from any active process, but from the scars of the old disease, improve greatly by being taken off specific treatment and given tonics and food. Mercury and potassium iodid are only of great use during the active period of the disease. The best method of administering mercury is by inunction. I think that for diplomatic reasons it is wiser in private practice to use the ten per

cent. oleate than blue ointment. It should be used once or twice daily, a dram each time. I do not think that the gigantic doses of iodid that it is now customary to give do as much good as smaller quantities. A dram a day, given largely diluted with water, is surely enough, and often smaller doses are sufficient. If by the end of a month there is no good result, specific treatment ought to be stopped; but if there is any improvement and the patient stands treatment well it should be continued indefinitely. We too often overlook entirely the necessity for general treatment. Syphilitics need food and air and exercise, or if they are bedridden massage and baths. Iron and arsenic and cod liver oil are of great value.

THE TREATMENT OF SYPHILIS.*

BY H. M. CHRISTIAN, M.D., OF PHILADELPHIA, PA.

Syphilis, occurring among the upper and middle classes of our people, in individuals endowed with good health and of fairly good habits, if seen early in the secondary stages of the disease and promptly and properly treated, is, in the great majority of cases, a perfectly curable disease. This is a proposition generally accepted as true at the present day, by those having the widest experience in the treatment of the disease. Equally well recognized is the fact that syphilis occurring among the half-starved and half-washed members of the community, and in habitual drunkards, cannot be cured. The same can be said for cases having once developed tertiary lesions. Treatment can cause their disappearance, but cannot now cure the disease. It would seem to the writer as if the time was ripe to call a halt on the spirit of ultra pessimism which has so long possessed the medical profession at large on the subject of the curability of syphilis and which is so largely responsible for the attitude of the laity on the matter, so many of whom upon being told that they have contracted syphilis manifest a keen desire to write their wills and go in search of a revolver. There is, I am sure, in nearly every community of any size in this land, men of business and social

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prominence occupying positions of trust and honor, who have at one time in their lives contracted syphilis, who have been cured and are the fathers of many healthy children. Granting then that the disease is capable of being cured the first question that naturally arises is, when shall constitutional treatment be instituted. I think that it is pretty generally admitted today that by far the safer plan is to wait for the evolution of cutaneous lesions before beginning constitutional treatment. The reasons for so doing are very obvious to those who have looked at all closely into this subject. In the first place, notwithstanding the parallel column of differential diagnosis between chancre and chancroid given in the textbooks, those having the widest experience in the diagnosis and treatment of these conditions will agree with me, I am sure, that in very many, if not a majority of instances, an absolute diagnosis cannot be made. Again it is a well-developed clinical fact that the early administration of mercury does not in any way avert the disease or prevent the appearance of an eruption. It has only been found to modify the character and time of development of the skin manifestations; in other words, the evolution of the constitutional signs of the disease is materially deranged. One can readily appreciate the hopeless confusion in the mind of the physician who, having mistakenly diagnosed a chancroid as a chancre, has pronounced the patient to have syphilis, has instituted immediate constitutional treatment, and subsequently finds that the expected rash fails to materialize. The uncertainty in the mind of the physician is of small moment, however, compared with the impression his recklessly spoken words have made upon the mind of the hapless patient, an impression that no time will ever eradicate. There is nothing to be lost and everything to be gained by waiting six or seven weeks for the normal evolution of the disease. There are, however, some conditions than arise occasionally that call for the early administration of mercury. These are: (1) when the chancre is located on the lip. (2) When from its position it may lead to the infection of others, as on the finger of the surgeon, obstetrician or hospital orderly; or on the nipple of a nursing woman. (3) In those rare instances in which the initial lesion becomes phagedenic and threatens to destroy the prepuce or glans

penis. In taking up in detail the consideration of the treatment of secondary syphilis it is well to recognize three types of the disease that are usually encountered: (1) the benign form; (2) the benign form with a tendency to relapse; (3) a severe form of the affection. The particular type which the disease assumes is, of course, as in all infectious diseases, dependent upon the dose of the poison received and the fertility of the soil on which it is deposited. I think that there is little doubt but that the majority of the cases of secondary syphilis seen today, at least among the better classes, are of the benign type. Here the macular rash appears at the proper time and is fairly well distributed over the trunk and limbs, rarely on the face. Accompanying the rash there is general adenopathy, with more or less sore throat, and some few mucous patches perhaps in the mouth with little if any alopecia. In this type of syphilis it will generally be found that the internal administration of mercury protiodid, one-third of a grain three times daily, will probably be all that is necessary to bring about a prompt disappearance of the eruption. If, however, this should prove rather slow in fading away a fourth pill can be given at bedtime. As a rule, this is all that is indicated. In these cases the type of the disease is so, comparatively speaking, mild that there is constant danger that the patient, unless warned to the contrary, may break away from all treatment, considering himself as entirely cured, thereby laying the foundation for the development of tertiary lesions at a subsequent time. The second type of the affection is most apt to be found developing in individuals whose general system is somewhat below par, addicted, perhaps, to the excessive use of alcohol and tobacco. In these patients the evolution of the cutaneous lesions is perfectly regular, but it soon becomes manifest that there is a constant tendency to the recurrence of mucous patches on the tongue, lips and buccal mucous membrane. The original erythema is slow to disappear and the papular form of lesion appears very early. Recurrent moist papules about the anus and scrotum are frequently noted. In this variety of syphilis I have found the tonic treatment with mercury so strongly advised by Keys to be the best. My method in such cases is to instruct the patient to take an extra mercury protiodid pill every other day until the teeth

become tender or the gums bleed when lightly touched. The number of pills required to attain this result is divided by two, and the result constitutes the patient's daily tonic dose of mercury. Should there appear at any time during the secondary stage a fresh outbreak of a rash or mucous patches, the patient can be placed temporarily upon his maximum dose, which is of course known.

The third type of secondary syphilis presents a much more different proposition than either of the others just described. In these cases there is preceding the rash a marked leukocytosis with the decided loss of flesh. The appearance of the macular rash is accompanied with all the symptoms of an eruptive fever, headache, rise of temperature and nocturnal osteocopic pains. The erythematous lesions are rapidly followed by the appearance of a widely diffused papular and papulosquamous eruption. It is useless in these cases to lose valuable time in relying solely upon internal medication. Moreover, in the majority of these cases the gastrointestinal tract is so greatly disturbed that mercury given by the mouth will not only not be assimilated, but will greatly aid to increase the gastrointestinal derangement. Mercurial inunctions constitute our only effective weapon in these cases if we wish to gain the mastery over the disease. The preparation most commonly employed is the officinal mercurial ointment, one dram of it being rubbed well in on different parts of the body in succession night and morning. The patient in addition wears constantly an abdominal bandage on the inner side of which is spread a thin layer of the ointment. Mercury vasogen is a rather recent compound which I have used quite a little and have come to believe that it is more rapidly absorbed and therefore more effective in controlling the disease than the older blue ointment.

One great objection to the use of mercurial inunctions in the local dermatitis often produced by their prolonged use. This can generally be avoided if the skin be thoroughly cleaned with green soap and alcohol prior to employing the inunction. Frequent warm salt water baths constitute a most important and valuable adjunct to the treatment by inunction. It is wise at times to omit the inunctions for a day or two, especially if there is noted any tenderness of the gums or soreness of the

teeth. When the skin lesions have disappeared and the general condition is good, it is advisable to discontinue the inunctions and place the patient upon the internal use of mercury protiodid.

If subsequently during the secondary stage other manifestations of syphilis appear, another course of inunctions should be pursued.

These three forms are, I think, fairly representative of the types of secondary syphilis as encountered in practice. There is another type, the precocious malignant form, only seen as a rule among the lower classes of the community and where there are poor hygienic surroundings.

There are several preparations of mercury which it might be well to mention, all of which can be employed to great advantage alternately. The protiodid pill of Garnier and Lameureux causes less digestive disturbance, I think, than the American pill; to be sure, this may be due to the fact that it is only one-half quantity. Mercury and chalk, the favorite combination of Jonathan Hutchinson, is a very useful preparation to employ temporarily in cases in which the protiodid causes some diarrhea; but it has always seemed to me as being too attenuated a remedy to be of any real service during the active stage of the disease. Another preparation of mercury recently placed before the profession is mercuriol, which I have found very useful to use alternately with the protiodid; administered in one grain doses three or four times daily it will be found very valuable in cases in which the ordinary preparations of mercury cannot be assimilated.

The particular preparation of mercury to be employed during the secondary stage of syphilis is not near so important a matter as is the necessity of impressing upon the patient the fact that, in order to give himself the best chance of making a permanent recovery, a continuous course of treatment for eighteen months will be required. At the outset of treatment the patient's weight is the best criterion as to the action of the remedy upon the disease. If the weight does not increase, or on the other hand gradually decreases, either too much or too little mercury is being administered, or the wrong preparation is being employed.

Too much stress cannot be laid upon the injunction that the

patient should be treated as well as the disease. Cod liver oil, iron, quinin and whisky have time and again proven of service, equal almost to that of mercury in the treatment of the early stages of secondary syphilis.

After one and one-half years of active mercurial treatment the patient should be placed upon the mixed treatment usually employed in the tertiary stage of the disease. If there are no tertiary lesions present in the case, the mildest form of mixed treatment is all that is necessary. This can be one-twelfth of a grain of mercury bichlorid, or one-twentieth of a grain of mercury biniodid combined with two to five grains of potassium iodid administered three times daily. This treatment should be kept up steadily for the space of one year. In those cases in which potassium iodid deranges the digestion it can be given alone in milk or the syrup of hydriodic acid in combination with mercury bichlorid can be used. After a year of mixed treatment similar to this, a course of intermittent treatment should be instituted for about six months, at the end of which time, should no lesions appear, all treatment can be safely discontinued.

I want to reiterate my belief that a course of treatment such as just described, if faithfully carried out, will bring about a cure in seventy-five per cent. of cases of syphilis occurring in individuals possessing good general health, good habits and living under proper hygienic conditions. When tertiary lesions have once appeared I do not feel that we are ever justified in promising a permanent cure. All we can expect to do under such circumstances by treatment is to bring about the absorption of the lesions. At the same time, we should insist upon a prolonged continuous course of treatment, with the view of preventing any subsequent return.

In cases of ulcerating tubercular, syphilodermata and gummata the best results can be obtained by employing potassium iodid in from ten to twelve grain doses three times daily, together with the use of mercurial inunctions twice daily. Personally, I am thoroughly convinced of the fact that mercury is equally as valuable a remedy in tertiary as in secondary syphilis, and that its use in connection with moderate doses of potassium iodid will be found to prove much more effective than the sole employment of enormous doses of potassium iodid.

DISCUSSION.

DR. ROBERT N. WILLSON: A man has just left the Philadelphia Hospital who for months was looked upon as having a tuberculous process at the base of his right lung. Two weeks before he entered the Hospital he began to expectorate blood mixed with a large quantity of grayish-yellow mucus, and during most of the time he was in the ward he expectorated the same material. No tubercle bacilli were ever found, but large numbers of streptococci and of diplococci were found in this sputum. Dr. Salinger suggested that the mixed treatment be used; but the day before the order was instituted, Dr. Hughes, in his clinic, punctured the pleural cavity, thinking there was fluid present, and opened a small cavity from which he extracted a syringe-ful of blood. A few days after antisyphilitic treatment was begun all bleeding from the mouth had stopped. The signs of consolidation gradually disappeared and the man left the hospital with almost complete disappearance of the physical signs previously noted over his lung. The man at no time remembered a cutaneous lesion and would not acknowledge either a chancre or any syphilitic exposure. I always notice that when specialists in genitourinary work or in cutaneous lesions speak of this disease they omit reference to the fact that a case of syphilis may occur without visible early skin lesion. I have often discussed this question with them and have even heard an occasional absolute denial of such a possibility. It is my own belief that cases can occur without early cutaneous lesions. I recently saw a patient who had probably been infected with syphilis last July. At the time I first saw him he had only a profuse purulent discharge from the urethra which was full of gonococci. Months after sore throat developed and continued to a considerable time without treatment. Finally the patient awoke one morning to find that the palms of his hands and soles of his feet were covered with a pink papulosquamous eruption, the first sign since infection, six months before. Dr. Martin felt sure that the eruption was not due to syphilis, but was the result of the use of balsam of copaiba. The patient was treated with this idea for six or eight weeks. But within two weeks from the institution of mixed treatment the eruption, the sore throat and the alopecia disappeared, and to-day he is absolutely free

from all symptoms. I would like to ask Dr. Christian whether it has not also been his experience that such cases sometimes occur without any hint at diagnosis in the way of cutaneous lesions.

DR. A. E. ROUSSEL: About ten years ago I reported to this Society an interesting case of malignant syphilis that presented unique features, the most important of which was the appearance of a gummatous condition of the hard palate resulting in perforation ten weeks after the initial sore and while the secondary rash was still in evidence. Another point of interest in connection with this case was the fact that mercury, no matter now administered, internally, hypodermically, by inunction or by fumigation, could not be borne. It was followed by the occurrence of a marked diarrhea and other gastrointestinal symptoms. The case went from bad to worse. Other forms of treatment were tried. The patient subsequently developed a syphilitic boulimia, a syphilitic constriction of the esophagus, and died in a year's time. The point of interest was that the mercury produced the same gastrointestinal symptoms, no matter how administered. It has been my experience, and the teaching of the French authorities, particularly Fournier, that many patients who bear the administration of mercury badly can take large doses for a longer course of time, provided the teeth are first placed in good condition and the mouth is kept clean. In many patients after having been saturated with mercury, the case comes to a standstill. In such cases tonic treatment alone, or perhaps a cessation of all therapeutic treatment and the adoption of hygienic measures, produces the best results. In many instances the cases that have shown mild secondary eruptions are those that show a larger relative proportion of marked tertiary lesions. This is doubtless due to the fact that these patients do not remain under treatment a sufficiently long time for the proper elimination of the poison. Some of the older authorities say that the late eruptions are followed by severe tertiary lesions, irrespective of the treatment. The lack of treatment is probably a better reason for these particular occurrences.

DR. E. HOLLINGSWORTH SITER: I recall a case of gumma of both testicles, in which a diagnosis of tuberculosis of both

testicles had been made after the patient had responded to the tuberculin test. Castration was to have been done the next day. I told the physician in charge that I knew that the patient had an old syphilitic history and that it might possibly be well to try some mixed treatment first. The man responded to treatment and the gumma almost disappeared. I have recently seen a number of cases in which the eruption of scabies has been mistaken for that of syphilis. The principal reason for the error in diagnosis is the absence of burrows in the webs of the fingers. I have seen a number of cases of scabies without burrows between the fingers, although I believe that is stated to be a diagnostic sign.

DR. R. O. KEVIN: About one year ago I had a case of syphilis in which liver symptoms, such as have been mentioned, developed. I have seen a good deal of syphilis, but this is the only case of liver syphilis in private practice that has come under my notice. During the attack my patient developed marked jaundice, despite large doses of mercury administered through all the recognized channels, nor was potassium iodid of any service: my patient perished. Marshall, of Dublin, was the first physician, I believe, to use potassium iodid in the tertiary lesions of syphilis, in 1822. Whitla, of Belfast, first pointed out the importance of watching the body weight referred to by Dr. Christian. Hypodermically I have found gray oil in late syphilis of great value, while at the same time iodid may be given internally. I agree with Dr. Christian that very large doses of iodid are not indicated and sometimes do more harm than good. Dr. Amilon, of this city, has recently introduced a method of treatment, that of Professor Möller, of Stockholm. The preparation he employs is a mixture or amalgam of mercury, aluminum magnesium and almond oil introduced into the circulation hypodermically. Dr. Amilon plunges the needle, which is over two inches long, straight into the gluteal muscles. He then withdraws the syringe, leaving the needle *in situ*, sees that no blood comes out of the needle, readjusts his syringe and injects the mercurial preparation. I have seen the eruption of secondary syphilis disappear more rapidly from this method of treatment than from any other. Möller's method is at present being largely used in Professor Horwitz's clinic at the Jefferson

Hospital in tertiary syphilis, and I believe the profession will hear more of it later on. Möller does not think so favorably of mercurial inunctions as some of the rest of us. It has been pretty well proven that relapses are less frequent after inunctions than after the usual method of administering mercury. Fournier's method consists in administering mercury during three or four years after the chancre but at increasing intervals; during the intervals of mercurial treatment he gives iodid. Neisser, on the contrary, prefers frictions and injections. Blaschko, in the *Berliner klinische Wochenschrift*, states that cases improve more readily when there is increased muscular action, such as riding, rowing, hot baths, etc., etc. At the present time I have a patient who has a rather obstinate case of syphilis. The man has had charge of the cold storage department of a large hotel in this city. I advised him to change his occupation, and he is now a cook. He sweats profusely, he tells me, and his case has improved very much since he began his new employment.

DR. J. F. E. COLGAN: Professor DaCosta on one occasion had a patient in clinic in whom the diagnosis lay between gumma of the lung and tuberculosis. It was finally decided that there was gumma of the lung.

DR. ERNEST LAPLACE: There are a great many patients who have syphilis and who are apparently cured, but in whom the slightest traumatism will call into existence some manifestation of the disease. By traumatism I mean a slight spontaneous injury or an injury inflicted by the surgeon in the performance of a necessary surgical operation. The manifestations of syphilis under these circumstances are most protean; for example, a tumor may follow such a traumatism, which may resemble epithelioma, or there may be proliferation of fibrous tissue, behind the peritoneum for example, simulating a retroperitoneal sarcoma to such an extent that it may be pronounced inoperable. If treated with antisypilitic remedies such a growth will disappear. In a case in which syphilis has been apparently cured, a wound which ought to do well will suddenly take a queer turn, a grayish slough will appear and continue, until by examination some old traces of syphilis are discovered, which will indicate the proper method for the healthy restoration of that wound careful specific treatment.

DR. A. A. ESHNER: One occasionally sees cases of suspected syphilis, in which, if there have been cutaneous manifestations, they have been overlooked on the part of the patient, and one naturally remains in doubt whether or not he shall institute treatment. It has seemed to me, as Dr. Willson has indicated, that occasionally there may be cases of syphilis in which cutaneous manifestations do not appear, but in which, after the lapse of a considerable interval of time, the gravest symptoms of syphilis arise. It is on this account that I have sometimes raised the question whether in cases in which the history, the primary lesion and the attendant circumstances render a diagnosis of syphilis as nearly as possible positive, it would not be better to begin the administration of mercury at once, without waiting for the appearance of cutaneous manifestations that may never appear, until the patient is overwhelmed by the development of grave nervous and perhaps other visceral lesions.

DR. SCHAMBERG: The queries of Dr. Willson and Dr. Eshner recall to my mind a sergeant in the army whom I saw about 2 years with a syphiloderm upon the palms of his hands. He was an intelligent man of careful bodily habits, but never knew of any manifestation upon the skin antecedent to the palmar eruption. I believe that in unusual instances the secondary roseola may be so slight as not to be visible except upon close inspection in proper light. While the eruption is commonly overlooked and not noticed, I believe it possible in rare cases for it to be clinically absent. I believe that Dr. Christian's proposition not to begin treatment before the appearance of the secondary eruption is really a safe one. However, theoretically, this is not a good plan, and I believe when the diagnosis can be firmly established before the appearance of the eruption it is advisable to begin the treatment as soon as the diagnosis is made. In one of my patients in whom the diagnosis was made from the presence of an initial lesion of sclerotic hardness, an indurated lymphangitis and enlargement of the neighboring lymphatic glands, the institution of vigorous mercurial inunctions prevented the oncoming symptoms, and the man never had a cutaneous outbreak, although he was under daily inspection for a long time. He did some months later have ulceration of the tonsils and of the posterior pharynx.

geal wall. During the time that we are waiting for the secondary eruption to appear there is doubtless a proliferation of the germ of syphilis and an increased production of toxins in the system with the production of noxious effects upon the tissues generally. In no other disease do we wait for such a condition of affairs if it is possible to diagnose and treat it before that time. I believe with Dr. Christian that it is undesirable to begin constitutional treatment if there is any doubt as to diagnosis existing in the mind of the physician, and furthermore, that, as a rule, the diagnosis is not perfectly clear until the secondaries appear. There is nothing so destructive to the carrying out of a proper treatment as uncertainty. The comparative merits of the various methods of treatment of syphilis need not be long considered. That which is desired is the introduction of a certain amount of mercury into the blood. It matters not by what channel it is introduced so long as it gets there. It may be given by the mouth, by hypodermic injection, by inunction or by inhalation. The point to remember is that mercury in the gastrointestinal tract or in an insoluble form beneath the skin is, properly speaking, not in the system. When mercury produces a diarrhea the patient is absorbing very little of the drug. The dose is largely a matter of individuality, as with all drugs. I believe there is no better method than that of carefully carried out mercurial inunctions. But that term, carefully carried out mercurial inunctions, means much. It does not indicate merely rubbing on to the skin a certain amount of mercury. The inunction can best be done by a second person. When a patient can afford it, I usually have a masseur rub the ointment into the skin, preferably over the back. In some cases the rubbing is continued for an hour. The dose of mercury and the duration of the inunction depend upon the effect. In dealing with obstinate, late syphilitic manifestations of the skin it is my rule to make an impression either upon the disease or the patient. If the disease fails to yield and the patient shows no effect of the drug, the drug must either be increased or the duration of the inunction prolonged. In the use of mercurial inunctions it is advisable to dilute the ointment with lanolin, first—because this is a most absorbable ointment base and probably increases the absorbability of the mercury, and second, because

it lessens the irritant effect of the mercurial ointment upon the skin, I have had some experience with the hypodermic treatment of syphilis. The soluble preparations appear to me to be preferable and I usually employ mercury bichlorid. In a series of 350 injections I have been fortunate not to have produced an abscess, although I have frequently seen localized indurations result. I believe that the hypodermic treatment is to be reserved for special indications and should not be used as a routine measure. In one patient in whom I employed injections of mercury no other method was available. Mercury by mouth in sufficient dosage could not be tolerated, and injections invariably produced a dermatitis.

DR. CHRISTIAN: The point brought out by Dr. Roussel is one that I endeavored to emphasize in my paper, i. e., that the patient is always to be treated as well as the disease, and that during the treatment of a case of syphilis it is often advisable to suspend specific treatment temporarily. Cases of precocious malignant syphilis are fortunately rare, and are encountered, as a rule, only in dispensary practice. In these cases tertiary ulcerative lesions appear within the first few months, and there is always marked cachexia with emaciation. Another question that always enters my mind when discussing syphilis is whether we are always justified in jumping at the conclusion that because some obscure condition or certain local lesions are benefitted or cured by the administration of mercury and potassium iodid, that therefore the patient must have syphilis. This is a time-honored tradition, I know, and is still taught and practiced; but I have never been able to entirely satisfy my own mind on the matter and often wondered whether it is not perfectly possible for these drugs to cure something else than syphilis.

THE TREATMENT OF SEROUS EFFUSIONS.*

**ABSTRACT OF A CLINICAL LECTURE DELIVERED AT THE
LIVERPOOL ROYAL INFIRMARY.**

BY JAMES BARR, M.D., F.R.C.P.

The author describes what is evidently a new method of treating serous effusions. The idea occurred to him to inject one fluidrachm of adrenalin chloride solution into the pleural sac, in a case of abdominal cancer extending to the pleura, after the aspiration of a large quantity of bloody serum, the object of the injection being to lessen the secretion. There was no further secretion, consequently no further tapping, and the patient spent the remainder of her life in perfect comfort so far as her chest was concerned.

This treatment was extended to cases of ascites due to hepatic cirrhosis in which marked results were not expected. However, the rapidity of secretion was diminished and no ill effects were noted, the quantity of adrenalin solution used varying from two to three fluidrachms.

In a case of pericarditis with effusion, in a lad, 19 fluid-ounces of serum was withdrawn from the pericardium, but a reaccumulation rapidly followed. The patient's condition becoming critical the paracentesis was repeated, 20 ounces of fluid being withdrawn with immediate improvement in the quality of the pulse. Forty minims of solution adrenalin chloride, 1-1000, was injected into the pericardium. The pulse at the wrist disappeared, the boy became of an ashy leaden hue and had an anxious expression. Immediately nitroglycerin and atropin were administered and the boy quickly rallied. No further tapping was required. The same patient had a subsequent attack of left pleurisy with effusion. Ten fluid ounces of serum was withdrawn from the chest and one fluidrachm of adrenalin chloride solution was injected. There was no reaccumulation.

In a case of tuberculous peritonitis and ascites 200 fluid-ounces of serum was drawn and two fluidrachms of solution adrenalin chloride introduced into the peritoneal cavity, with four pints of aseptic air (to prevent adhesions). Thirteen days later 237 fluid-ounces of serum was withdrawn and two

**The British Medical Journal, March 19, 1904.*

fluidrachms of adrenalin chloride solution and two pints of air were injected. Upon a third occasion, eleven days later, 196 fluid-ounces of serum was obtained by tapping, and three fluidrachms of adrenalin chloride solution and four pints of sterile air were injected. No reaccumulation of fluid occurred.

A female child of seven years was the next patient. One pint of fluid was withdrawn from her pleural cavity and one fluidrachm of adrenalin chloride solution and half a pint of sterile air were injected. Though it was highly probable that the pleurisy was tuberculous, there was no reaccumulation of fluid and the patient recovered.

A Druggist's Commendable Innovation.—Many of our confreres, in the past, have had printed upon their prescription blanks a warning to the patient not to have the prescription repeated without especial instructions from the prescriber; this in order to protect the patient, not only from his own ignorance, but from the possible predacious qualities of an unscrupulous pharmacist in the patient's town or elsewhere. We commend the action of a druggist of Grand Rapids, Mich., a pioneer, we believe, in this line, who, we learn from the *American Druggist*, makes a regular practice of attaching a small label to each bottle or package, bearing the following legend: "More harm than good is sometimes done by refilling a prescription, so consult your physician before getting this refilled."

The above has appeared in the columns of the *New York Medical Journal* and almost sounds too good to be true. Were we not convinced of the veracity of our esteemed contemporary we might doubt it. However, the action of the druggist mentioned is so rare that the *American Druggist* should have published the name of such a *rara aris in terram*.

THE ST. LOUIS Medical and Surgical Journal.

A. H. OHMANN-DUMESNIL, A.M., M.D.,

Editor and Proprietor.

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EDITORIAL DEPARTMENT.

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EDITORIAL.

MEDICAL SOCIETIES.

The constantly recurring meetings of medical associations are certainly to be looked upon as a cause for congratulation by members of the medical profession. The State and national associations are certainly the best means of promoting professional comity and of fostering that spirit of solidarity which should characterize men whose aims and purposes are cast along the same lines. One of the great advantages of these meetings is that they permit of the renewal of old friendships and the formation of new ones. To the younger members of the medical profession they furnish the often long desired, long cherished desire of personally conversing with those whom they have only known by their books and other published writings. They can thus obtain opinions which whilst as authoritative are not given in as formal a manner as when they are published with an eye to possible criticism.

Whilst the purely scientific part, more particularly as evidenced by the discussions, are of the utmost value and, by

themselves alone, constitute an attractive feature, their value is still more enhanced by the fact that they often share of the nature of scientific battles between giants in which the keenest reasoning and the best logic form the arms in this logical warfare. It is by a close attention to these discussions that the various pitfalls which beset the path of the too enthusiastic beginner are pointed out and he learns how to avoid them and become careful, and arriving at premature conclusions in such as are not justified by the premises. The close attention of every one attending these meetings is certainly a *sine qua non*, or else the entire matter resolves itself into a failure so far as any results are concerned. Such meetings show the utility of medical societies which, whilst always of advantage, are still more so when attended by medical men from many different points of the country.

Among the important congresses which are to be held in St. Louis are the Congress on Tuberculosis and the International Congress of Military Surgeons. Both of these are important societies and will no doubt hold sessions that will result in much good for the benefit of humanity. They are a development of the small local medical society and, like all large medical gatherings, result in a certain measure to the advance of medical knowledge.

Association of Military Surgeons of the United States.—The Thirteenth annual meeting of this Association will take place at St. Louis, October 10 to 15, 1904. It will also constitute the International Congress of Military, and this will add in no small degree to its importance. The officers of the Association are as follows: President, Medical Director John C. Wise, U.S.N., Warrenton, Va.; First Vice President, Surgeon-General Walter Wyman, P.H. and M.H.S., Washington, D. C.; Second Vice President, Major Albert H. Briggs, N.G.N.Y., Buffalo, N. Y.; Third Vice President, Brig.-Gen. Robert M. O'Reilly, U.S.A., Washington, D. C.; Secretary, Major James Evelyn Pilcher, U.S.V., Carlisle, Pa.; Treasurer, Major Herbert A. Arnold, N.G.Pa., Ardmore, Pa. A large attendance is expected, and the papers which will be contributed will be of the highest value to visiting surgeons.

BOOK REVIEWS.

International Clinics. A Quarterly of Illustrated Clinical Lectures, and especially prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by A. O. J. KELLEY, A.M., M.D., with the Collaboration of WM. OSLER, M.D., JOHN H. MUSSER, M.D., J. B. MURPHY, M.D., JAS. STEWART, M.D., A. MCPHEDRAN, M.D., THOS. M. ROTCH, M.D., JOHN G. CLARK, M.D., JAMES J. WALSH, M.D., J. W. BALLANTYNE, M.D., JOHN HAROLD, M.D., EDMUND LANDOLT, M.D., RICHARD KRETZ, A. M. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Vol. I., Fourteenth Series, 1904. 8vo. pp. 304. Illustrated. [Philadelphia: J. B. Lippincott Co. 1903. Price, \$2.00 net.

We once more have the pleasure of having the opportunity of reviewing a number of *International Clinics*, a quarterly publication which has assumed international proportions, its contributors as well as editorial staff including in their number the leading teachers and writers of both America and Europe. They are all recognized authorities, and whatever emanates from their pens is certainly above the average and deserving of the closest attention and study. In fact, the volumes constitute as good a post-graduate curriculum as could very well be obtained outside the walls of a college or university. In addition to this we are brought in contact with men whom we could not hope to know otherwise, even were the time and money necessary to do so available.

The present volume is without doubt a most superior one both in the character of its contents and of its illustrations, which are numerous and include two very well executed plates. In the portion devoted to Treatment an excellent article is that by F. Vidal and N. Juval on the Chlorid Reduction Treatment of Parenchymatous Nephritis. Adonidin: A Clinical Study by Reynold Webb Wilcox, is a valuable contribution to Therapeutics. What is the cure for Neurasthenia by Robert T. Edes and the Treatment of Gastric Neurasthenia and Allied Conditions by George W. McCaskey will be read with much interest. Whilst there are but four articles devoted to the subject of Medicine each one is of the highest interest. Henry W. Cattell, formerly Editor of the *International Clinics*, is represented by a very

interesting as well as valuable article on the Practical Application of Cryoscopy to Medicine. The Early Diagnosis of Pulmonary Tuberculosis by James J. Walsh is a contribution which will prove of the highest interest and utility to medical practitioners.

Surgery is particularly well represented in this volume. Angioma and its Treatment receiving a thorough discussion at the hands of Carl Beck. The paper is thoroughly illustrated with half tones and two colored plates. John G. Clark and John W. Luther present a well illustrated Critical Review of Methods of Intestinal Anastomosis, with especial Reference to the Connell Suture. A Report of Five Cases. This will prove of especial interest to surgeons as well as the Observations upon Gastric, Intestinal and Liver Surgery in the German Clinics by Charles P. Noble. In the department of Gynecology there are two articles which are to be highly commended as they are destined to exercise some influence in restraining the operation madness. Francis H. Davenport on the Non-Operative Treatment of Inflammations of the Genital Tract and Daniel H. Craig on the Non-Operative Treatment of Chronic Ovarian Lesions have by these papers conferred a boon on suffering womankind and done much to improve the practice of gynecology. Neurology is represented by one paper on Peripheral Neuritis by William Broadbuss Pritchard.

This volume concludes with a well written review of the Progress of Medicine during 1903. This is a very carefully edited portion and evidences much discrimination and judgment on the part of its writers. Medicine is taken up by David C. Edsall, Surgery by Joseph C. Bloodgood, and Treatment by A. A. Stevens. A number of illustrations are introduced and the entire review is introduced in a classified form, thus making it capable of being referred to in a manner which is both easy and satisfactory. This review alone takes up 115 pages and is a good departure as it gives much information not easily obtainable by the majority of physicians.

We have not attempted to give a complete review of this volume, but sufficient has been said to enable our readers to form an opinion of this excellent number. The publishers have excelled their previous good record in the mechanical execution of this book and it is simply stating a fact that they have surpassed all former efforts. When we consider the amount of high grade reading material furnished, the handsome printing and illustrations as well as the binding, it is certainly a marvel of cheapness at the price at which it is offered. We can safely say that those of our readers who obtain the International Clinics will be delighted with their investment and those who do not will have occasion to regret not having done so.

A Practical Treatise on Medical Diagnosis. For Students and Physicians. By JOHN H. MUSSER, M.D. Fifth Edition. Revised and Enlarged. 8vo. pp. 1213. Illustrated with 395 Woodcuts and 63 Colored Plates. [Philadelphia and New York: Lea Brothers & Co. 1904. Price, cloth, \$6.50; leather, \$7.50; half morocco, \$8.00 net.

We have, of late, been presented with some very capable works dealing with the subject of diagnosis in medicine, but we very much doubt that the superior of the one before us has reached the hands of the English reading portion of the medical profession. And it is also a noteworthy fact that those which have appeared in this country were translations of the works of continental teachers. It is for this reason, as well as for others which might be brought forward, that we should feel more than ordinarily pleased at the appearance of Musser's work. It adds another reason to our claims of coming to the forefront in medicine and strengthens whatever pride we may have expressed regarding our medical men and their good work done in the way of advancing medicine in all of its branches, both theoretical and practical.

That the work before us is a standard authority on its subject is an acknowledged fact and that this has been accepted is evidenced by the fact that it is now in its fourth edition. All the editions have appeared at sufficiently short periods of frequency to enable the author to be always up to date in a department which is continuously making demands for this. This work is not merely a short text-book, but it is a work which will thoroughly equip the physician in that most essential quality for successful therapeutics—accurate diagnosis. Furnishing the student of its pages with this foundation the superstructure of successful treatment is a foregone conclusion, and he who masters the contents of the volume before us will feel his mastery of the subject just as others will be forced to recognize it. We are by no means exaggerating the importance and value of the work, as can be readily appreciated by any one who will obtain it and carefully study its pages with the determination of learning its contents.

The arrangement of the work has been completely changed in this edition and the purely theoretical considerations have been condensed. This has permitted the addition of one hundred pages and more thorough explanation of practical points. All of these changes have brought about a complete rewriting of the entire work, so that, in its present form, it is practically a new book, containing the latest, presented in the most logical and rational manner to enable the proper approaching of a diagnosis in actual practice. The book is divided into two parts: Part I. is on General Diagnosis, and Part II. on Special Diagnosis. Part I. is again divided into six sections: Section

I. deals with General Considerations; Section II. is given to Historical Diagnosis or Data Obtained by Inquiry; Section III. Works of Subjective Diagnosis or Data Obtained by Inquiry; Section IV. takes up Objective Diagnosis or Data obtained by Observation, including the examination of all organs and viscera; Section V. is concerned with Physical Diagnosis, including the Roentgen ray in medical diagnosis; and Section VI. takes up Laboratory Diagnosis, which is by no means the least important of the methods employed. Part II., on Special Diagnosis, takes up the different diseases of the various organs and their diagnosis.

We can hardly dwell upon all of the good points presented by this book, but may be permitted to call attention to a few. Thus, the urine and its proper examination is given in a most thorough and scientific manner, and bacteriology is given its full share of prominence. The lungs and heart are accorded that amount of consideration which the importance of their diseases demands. The blood and its examination is also entered into in a very satisfactory manner. Diseases of the nervous system receive a large share of attention, as is but right and proper. General and systemic diseases are also properly considered in a very clear and lucid manner.

In this edition the number of illustrations has been nearly doubled and fourteen new colored plates have been added. The volume stands to-day as the most lavishly illustrated work ever published on diagnosis. This has not been extravagantly done, but the pictures have been well distributed and they cannot but be of the greatest help to the physician. The teacher will find them of the greatest help in making students pass a higher grade in their examinations. The publishers have made a handsome volume of this and they and the author are to be congratulated upon the completion of this excellent work.

A Manual of Fever Nursing. By REYNOLD WEBB WILCOX. M.A., M.D., LL.D. 12mo. pp. 236. Illustrated. [Philadelphia: P. Blackiston's Son & Co. 1904. Price, \$1.00 net.

In this little book the author has presented the medical profession with a hand-book of the highest value to nurses and one which will prove most useful to physicians as well. The subject is treated thoroughly and exhaustively and the guide followed by the author has been his lectures to the nurses of St. Mark's Hospital of New York City. The book is divided into nine chapters, which are respectively devoted to fever, its definition and diagnosis, and its general treatment. Then the nurse, the sick-room and its furniture, the patient, etc., are considered. Infections of continued type and the same with

local manifestations are noted. Infections of intermittent type are next taken up and, following this, the exanthemata. The concluding chapter deals with thermic fever. The book is a well written one and practical in every detail. The author is a well known writer, who has made many valuable contributions to medical literature. We feel certain that his little work will be eagerly taken up by trained nurses and we unhesitatingly recommend it to them as well as to their teacher. It is a timely work and full of good suggestions, useful to patients, nurses and physicians alike.

Missouri Botanical Garden. Fiftieth Annual Report. .8vo. pp. 129. With 45 plates. [St. Louis: Published by the Board of Trustees. 1904.

The volume before us comprises two well written articles, one, the longer one, being on Ecological Comparison of Some Typical Swamp Areas, by Samuel Woods Coulter. This was a thesis presented to the Faculty of Washington University, in candidacy for the degree of Ph.D., April 1903. It is a paper of 71 pages, illustrated with 22 plates and written in a manner that will waken the interest of all who are concerned in the study of botany the world over. The second paper is on Two Fungi Growing in Holes Made by Wood-Boring Insects, by Perley Spaulding. The third contribution is on Ecologically Aberrant Begonia. The final, thoroughly well illustrated contribution by William Trélease is on the Aberrant Veil Relics in some Edible Agarics. The entire volume is well edited by Dr. Trélease, the efficient Director of the Garden, and he deserves much credit, not only for the character of this report, but for the rapidity with which he has prepared it. It will prove invaluable to botanists like its predecessors have.

The Medical News Pocket Formulary. By E. QUIN THORNTON M.D. Long 18mo. pp. 287. New (Sixth) Edition. [Philadelphia and New York: Lea Brothers & Co. 1904. Leather, wallet shape for the pocket, price, \$1.50 net.

The author does not present this little book as a substitute for the larger works on therapeutics, but rather in the way of a reminder of many pertinent suggestions. He very probably indicates in what stages certain formulas are indicated and each one is followed by a few but very instructive annotations. These little discriminating remarks are what give added value to this therapeutic memorandum book. Whilst not omitting the older remedies of proven worth, he does not forget to introduce us to the newer remedies; but, here again, he only deals with those which have been tried and tested. In fact, this formulary has been thoroughly brought up to date. The book opens with 16 pages of useful data, including such useful parts of

information as incompatibles; poisons and their antidotes, and a full prological table. This book, as a whole, will be found to be a very useful and handy pocket remembrancer for the physician and will often suggest a remedy which has slipped his memory. The book is handsomely gotten up by the publishers.

Manual of Materia Medica and Pharmacy. Specially designed for the use of Practitioners and Medical, Pharmaceutical, Dental and Veterinary Students. By E. STANTON MUIR, Ph.G., V.M.D. 8vo., pp. 192. Third Edition. Revised and Enlarged. [Philadelphia: F. A. Davis Company. 1904. Price, \$2.00 net.

This book has been quite a popular one with those students for whom it was intended, and its popularity has been attested by the number of editions through which it has gone. The author has not taken into consideration either pharmacology or therapeutics, but confines himself to materia medica and pharmacy. Despairing of finding a classification which will prove satisfactory to every one, he has simply arranged his subjects in alphabetical order. This book is divided into three parts. Part I. deals with General Considerations; Part II. contains a Consideration of Individual Drugs, and Part III. is devoted to Pharmacy. The author has made this a valuable book for students as well as a valuable one. It is one which any teacher may safely adopt as a text book, and the publisher has added to its usefulness by making it interleaved with blank pages for the introduction of whatever notes the student may deem useful.

Case Teaching in Surgery. By HERBERT L. BURRELL, M.D., and JOHN BAPST, M.D. 12mo. pp. 159. [Philadelphia: P. Blaxiston's Son & Co. 1904. Price, 75 cents.

As a little introduction this book should be adopted by all teachers of surgery. It contains the complete clinical histories and clinical examinations of 75 actual cases. These are printed on the left hand pages, the right hand pages being left blank for the student to fill in with his diagnosis, prognosis and treatment. This should prove a very popular method of teaching as it not only throws the student upon his own resources but furnishes a good index of how he has learned. Professors are furnished a key giving the correct diagnosis, treatment and prognosis, but it is not furnished to students. The authors have this matter in hand and they will, no doubt, see to it that it reaches the proper hands.

The book is gotten up in a handy shape and should prove popular.

Farmer Kilroy on the Evolution of Microbes, Monkeys and Great Men. By DR. SANDERSON CHRISTISON. 12mo. pp. 81. [Chicago: The Meng Publishing Co. 1904. Price, 25 cents.

This little skit of Dr. Christison breathes forth a spirit of gentle and yet, forceful satire aimed at many of the fads and follies of modern as well as past investigators into evolution. The criticisms made here and there, whilst apparently homely, are trenchant and lay the weak spots bare. This booklet is one which can be read in a quarter of an hour and furnish material for thought for many hours. It is amusing and can serve to while away some of the tedium of a doctor's otherwise busy life.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Missouri Botanical Garden. Fifteenth Annual Report. 8vo. pp. 129. Plates, 45. [St. Louis: Published by the Board of Trustees. 1904.

A Manual of Fever Nursing. By Reynold Webb Wilcox, M.A., M.D., LL.D. 12mo. pp. 236. Illustrated. [Philadelphia: P. Blackiston's Son & Co. 1904. Price, \$1.00 net.

Farmer Kilroy on the Evolution of Microbes, Monkeys and Great Men. By Dr. Sanderson Christison. 12mo. pp. 81. [Chicago: The Meng Publishing Co. 1904. Price, 25 cents.

Case Teaching in Surgery. By Herbert L. Burrell, M.D., and John Bapst Blake, M.D. 12mo. pp. 159. [Philadelphia: P. Blackiston's Son & Co. 1904. Price, 75 cents net.

The Medical News Pocket Formulary. By E. Quin Thornton, M.D. Long 18mo. pp. 287. New (Sixth) Edition. [Philadelphia and New York: Lea Brothers & Co. 1904. Leather, wallet shape for the pocket, price, \$1.50 net.

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Manual of Materia Medica and Pharmacy. Specially Designed for the Use of Practitioners and Medical, Pharmaceutical, Dental and Veterinary Students. By E. Stanton Muir, Ph.G., V.M.D. 8vo. pp. 192. Third Edition. Revised and Enlarged. [Philadelphia: F. A. Davis Company. 1904. Price, \$2.00 net.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the world. Edited by A. O. J. Kelly, A.M., M.D., Wm. Osler, M.D.; John H. Musser, M.D.; John Stewart, M.D.; John B. Murphy, M.D.; Thomas M. Rotch, M.D.; John G. Clark, M.D.; James J. Walsh, M.D.; J. W. Ballantyne, M.D., John Harold, M.D.; Edmund Landolt, M.D.; and Richard Kretz, M.D. With Regular Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad, Vol. I., Fourteenth Series. 1904. 8vo. pp. 304. [Philadelphia: J. B. Lippincott Co. 1904. Price per volume: cloth, \$2.00; half-leather, \$2.50. Each series consists of four volumes.

Literary Note.—We have learned from Messrs. P. Blackiston's Son & Co., of Philadelphia, that in printing all the copies of Deaver's Surgical Anatomy so far demanded by its most successful sale, there will have been used 2,340 pounds of ink, 188,002 pounds or 64 tons of paper, and the printing will have made 3,455,000 impressions.

On and after July 1, 1904, the price of this work will be advanced to \$30.00 in half morocco, and \$33.00 in half Russia binding. This is certainly but a slight advance when the value of the work is taken into consideration.

"It Was Summertime in Dixie Land."—This is at present the biggest "Song Hit" in this country, was written by Edwin Kendall, and is being sung nightly in all the principal Theatres in this country from Maine to California. This song has made such a tremendous "hit" in New York, Boston, Philadelphia, Chicago and San Francisco, that the publishers predict a sale of over one million copies during 1904. Upon receipt of 25 cents in postage stamps, a copy of this beautiful song will be mailed to any address in the United States by the Theatrical Music Supply Company, No. 46 West 28th street, New York.

MELANGE.

Notable Changes and Additions in the Faculty of the New York School of Clinical Medicine.—At a meeting of the Medical Board of the New York School of Clinical Medicine, held April 9, Dr. J. L. Adams was elected Secretary of the School and professorial and other distinctions were conferred upon the following, in the departments specified: Mental Diseases—Prof. E. C. Dent, Superintendent Manhattan State Hospital West, Ward's Island. Internal Medicine—Prof. Wm. Brewster Clark, M.D. Gastro-Intestinal Diseases—Prof. Robert Coleman Kemp, M.D. Assoc.-Prof. Gragam Rogers, M.D. Hydro-Therapeutics—Prof. Alfred W. Gardner, M.D. Ophthalmology and Otology—Prof. Geo. Ash Taylor, M.D. Clinical Instructor and Assistant William E. West, M.D. Genito - Urinary Diseases—Chief of Clinic and Assoc.-Prof. C. Stern, M.D. Dermatology—Cheif of Clinic and Instructor L. D. Weiss, M.D.

Tri-State Medical Society.—The Tri-State Medical Society of Iowa, Illinois and Missouri will meet in the city of St. Louis June 15, 16 and 17, at the Louisiana building, Vandeventer avenue and Morgan street. The preliminary program is as follows: Surgical Section — Oration on Surgery, Dr. Arthur Dean Bevin, Chicago, Ill.; Cesarian Section, Dr. T. J. Maxwell, Keokuk, Ia.; Notes on Urethrotomy, Dr. G. Frank Lydston, Chicago, Ill.; Surgery of the Prostate, Dr. J. B. Murphy, Chicago, Ill.; Surgery of the Kidney, Dr. F. Reder, St. Louis, Mo.; Operative Treatment of Nephritis, Dr. Franklin Martin, Chicago, Ill.; Report of a Case of Posterior Pudendal Hernia, Dr. J. F. Tainter, St. Charles, Mo.; Treatment of Mastoiditis by the General Practitioner, Dr. Henry Jurgens, Edina, Mo.; Clinical Experience in the Surgery of Carcinoma of the Cecum, Dr. G. Wiley Broome, St. Louis, Mo.; Appendicitis: when is an operation indicated? Dr. F. B. Dorsey, Keokuk, Ia.; The Management of Graver Forms of Appendicitis, Dr. D. W. Basham, Wichita, Kan.; Breast Tumors of Young and Old Women, Dr. Spitzley, Detroit; Synchronous Intra and Extra-Uterine Pregnancy, Dr. D. C. Brockham, Ottumwa, Ia.; Experimental Research on Retro-deviation of the Uterus, Dr. Emil Ries, Chicago, Ill.; Trans-

Pleural Laparotomy, Dr. W. E. Schroeder, Chicago, Ill.; Surgical Report of Some Stomach Cases, Dr. John C. Oliver, Cincinnati, Ohio; Plastic Surgery, Dr. C. E. Ruth, Keokuk, Ia.; Massage, a Distinct Surgical Adjunct, Dr. J. T. White, Freeport, Ill.; The Rise of Anatomy and Surgery, with Lantern Slide Demonstration, Dr. James Moores Ball, St. Louis, Mo.; Glioma of the Retina, with Lantern Slide Demonstration, Dr. W. F. Fischer, St. Louis, Mo.; Some Cases of Kidney Surgery, Dr. J. W. Smith, St. Louis, Mo.; New Methods of Dressing Fractures, Dr. H. P. Wells, St. Louis, Mo.; Bilateral Extra-Uterine Pregnancy, Dr. R. E. Wilson, St. Louis, Mo.

Medical Section—Oration on Medicine, Dr. R. B. Preble, Chicago, Ill.; The Female Breast, Its Anatomical and Its Functions Independent of Lactation, Dr. Thomas Manly, New York, N. Y.; The Differential Diagnosis between Syphilitic Pseudo-Membranous Angina and Diphtheritic Angina, Dr. R. R. Campbell, Chicago, Ill.; Syphilitic Gummata as Seen by the General Practitioner, Dr. B. S. Pennington, Mediapolis, Ia.; The Chronological Sequence of Symptoms and their Ensemble as a Factor of Diagnosis in Cutaneous Syphilis, Dr. E. A. Fischkin, Chicago, Ill.; Malformations Through Inheritance, Dr. J. Laughlin, Ledyard, Ia.; Some Cases of Feigned Eruption, Demonstration with Lantern Slides, Dr. Heidingsfeld, Cincinnati, Ohio; Pathologic Considerations Relative to the Bile Passages, with Lantern Slide Demonstration, Dr. Horace W. Whitacre, Cincinnati, Ohio; Atonic Dilatation of the Stomach, Dr. Fenton B. Turck, Chicago, Ill.; Ocular Lesions in Scarlatina, Dr. E. O. Sisson, Keokuk, Ia.; Tuberculosis and its Treatment—some new ideas—with report of a case treated and cured, Dr. J. E. Hainline, Chicago, Ill.; Radio-Activity, Dr. J. C. Sullivan, Cairo, Ill.; The Uses of the Lesser Nervines, Dr. W. F. Waugh, Chicago, Ill.; Sanitation and Hygiene of Life, Dr. Geo. P. Neal, Fort Madison, Ia. Report of Cases, Dr. Charles J. Orr, St. Louis, Mo.; Radium and Light (Demonstration), Dr. H. Robarts, St. Louis, Mo.; Broncho-Pneumonia in Children, Dr. H. G. Nicks, St. Louis, Mo.; Biett's Collarette and the Satellite Syphilide, Dr. A. H. Ohmann-Dumesnil, St. Louis, Mo.

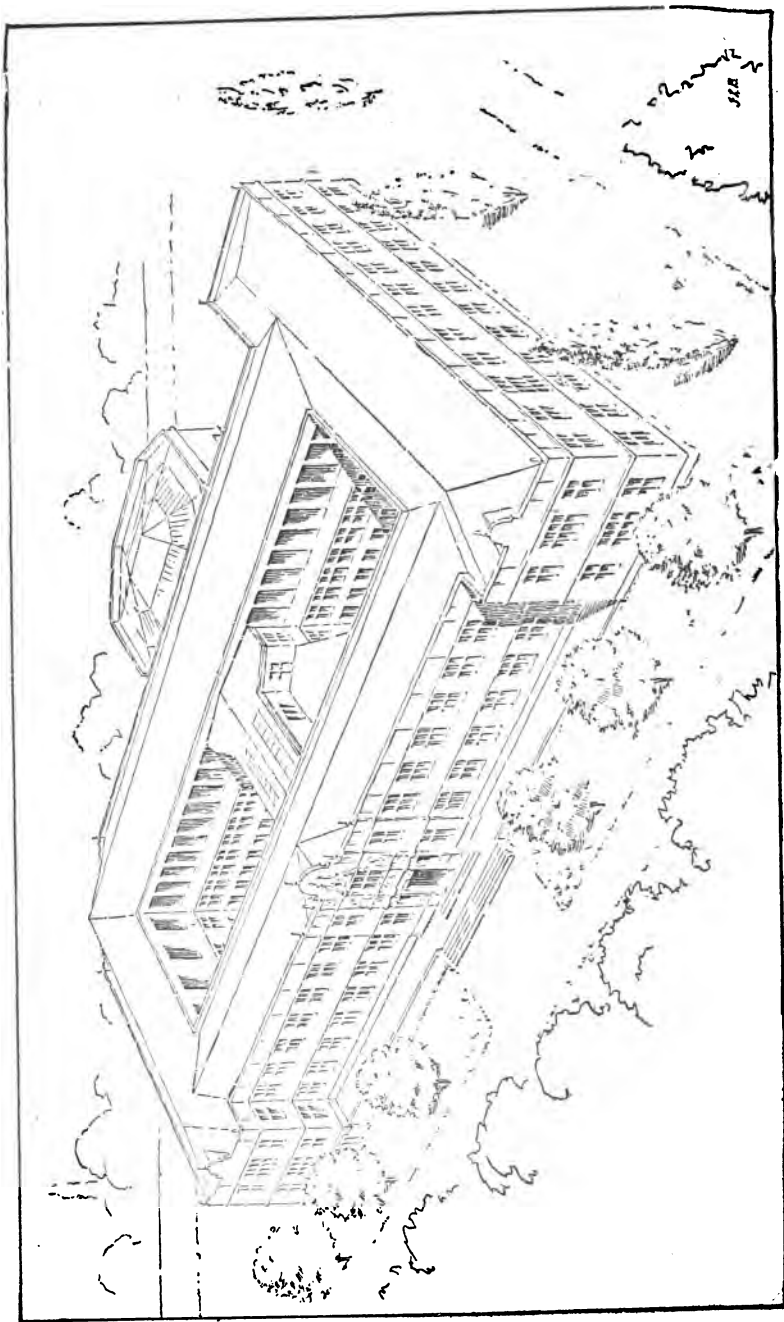
June is the ideal time for meeting in St. Louis. The weather will be delightful. The great Exposition will be in

full swing. "The Pike" will be in its most dazzling phase—fresh with all the ethnological (as well as pathological) attractions of the four quarters of the globe—and each costing about four quarters to see. The sessions will be held from 8:30 A.M. to 1 P.M., leaving afternoons for the Fair and evenings for the Pike. On June 16, however, three sessions will be held. Hence, the meeting ought to be a record-breaker in point of attendance.

New Era in Medical Teaching.—University of Pennsylvania About to Dedicate Most Complete Medical Laboratory in America.—The last quarter of the Nineteenth Century witnessed the conversion of the teaching and practice of medicine from a theoretical to a practical and demonstrative basis. This momentous change has been the result of the establishment of laboratories in which research in medical science might be conducted. By means of the facilities offered in these laboratories, workers have not only enormously increased our knowledge of the structure and functions of the human body and of the nature of disease, but have provided methods which have already robbed some of the most direful pestilences of their chief terrors.

In view of these contingencies the University of Pennsylvania has constructed a new medical laboratory which will be formally dedicated on June 10th, 1904. In completeness and equipment this new building is without rival. It provides for the teaching of students and the carrying on of research work on Physiology, Pathology and Pharmacology, in which departments of medicine the greatest advances have been made in the past and may be predicted for the future.

The opening of these laboratories is not simply of local but of national interest. About four years have been occupied in the construction of the building, which exclusive of its ground and equipment has cost in the neighborhood of \$700,000. The erection of a new medical hall, an anatomical building, auxiliary buildings, which will adjoin the building about to be dedicated, is also contemplated in the near future. These with the present hospitals and clinical laboratories will form one of the most extensive systems of buildings devoted to the teaching of medicine in Europe or America.



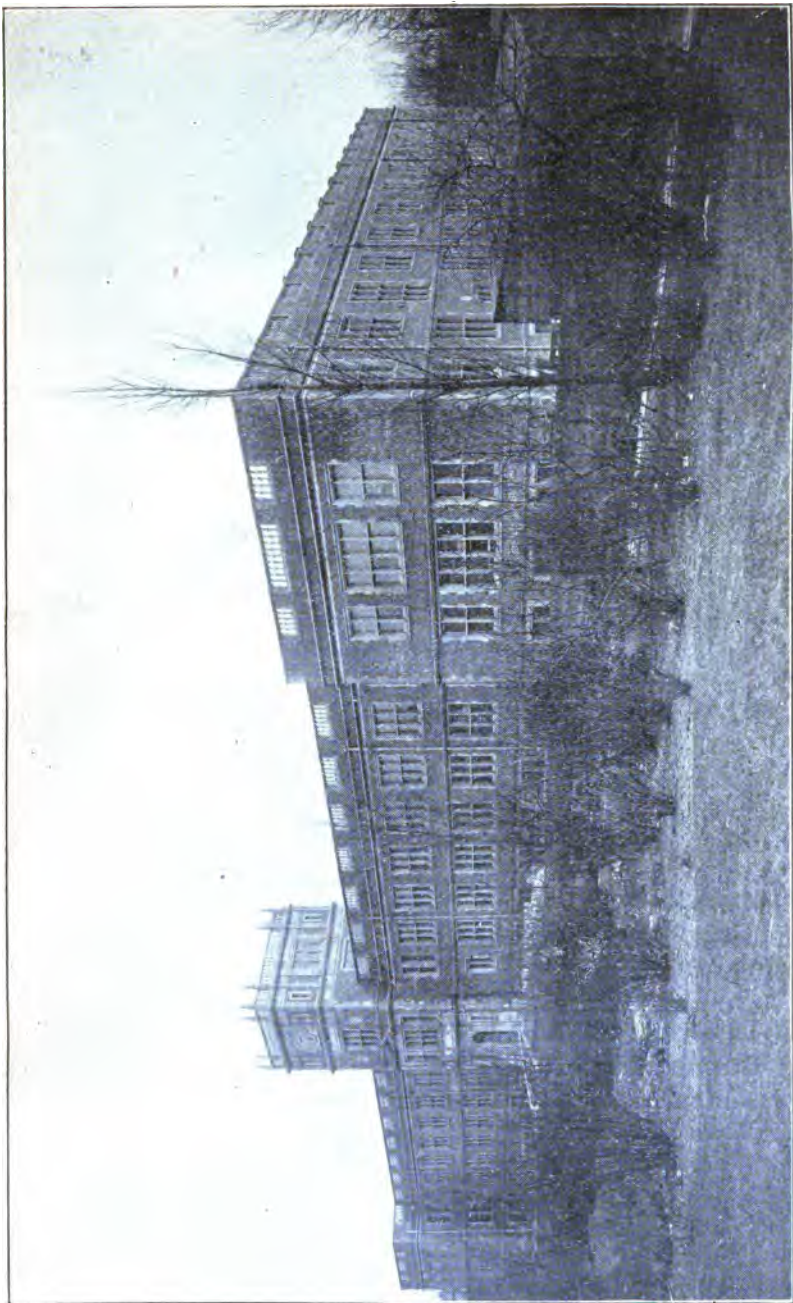
BIRD'S EYE VIEW, NEW MEDICAL LABORATORY BUILDING.

The new building is quadrangular in shape and is located on the south side of the Hamilton Walk, between Thirty-sixth and Thirty-seventh Streets, on the site of the old Veterinary Hall and Hospital. The building is two stories in height above a high basement and measures 337 feet front by nearly 200 feet in depth. The long front faces north, securing a maximum amount of the best light for laboratory purposes. All along the front are arranged small rooms for research, professors, assistants, etc. These open into a private corridor, so that those employed in these rooms may pursue their work without interruption from those passing through the main halls.

Perfect lighting of all the laboratories has been obtained, the courts being large enough, with the low front building, to furnish good north light to the Laboratory of Pharmacy and Pharmacodynamics on the first floor, and to the large laboratories on the second floor devoted to Pathology, where microscopic work is to be done.

The first floor of the new laboratories is to be devoted to Physiology and Pharmacodynamics. The basement rooms are also well lighted. Here will be located locker, recreation and toilet rooms for the students, janitor's quarters, rooms for practical instruction in physical diagnosis and bandaging, rooms for sub-section teaching in physiology, store rooms, research rooms, etc.

The department of physiology on the first floor will have provided one large room in which there will be ninety cabinets fully equipped with such apparatus as is required in the practical exercises in physiology carried on by the students. Three rooms have been especially constructed and equipped for aseptic operations on the lower animals, one of them being a preparation room for the operator, another one of them being a preparation room for the animals, and another for operating. A well equipped shop has been provided for the construction and repair of apparatus. In the east wing are a number of rooms for sub-section teaching, etc., in special departments in physiology, digestion, circulation, respiration, calorimetry, nerve-muscle, special senses, etc., respectively. There has also been provided a photographic dark room, and an adjoining room for projection and other optic apparatus, the importance



NEW MEDICAL LABORATORY BUILDING.

of which in the making of diagrams, charts, lantern slides will be apparent. The department of pharmacology has also been provided for on the first floor.

The second floor will be devoted exclusively to pathology, with temporary accommodations for a number of the professors of other departments, until the completion of future building operations looking to the final transfer of the entire medical school to buildings adjacent to the present new building. The east wing accommodates the laboratory of advanced pathological histology and a seminar and journal room; the west wing is occupied by the pathological museum, the gross morbid anatomy demonstration room, a room for museum preparation, photographic rooms and rooms for animal operations. The museum and gross morbid anatomy demonstration rooms are in close proximity to the large class laboratory of pathological histology in the west end of the southern part of the building for the obvious purposes of closely relating the instruction carried on in each. This last laboratory, that of pathological histology, the front of which consists almost entirely of glass, is located so as to face a spacious court to the north, thus insuring excellent and uniform light and admirably adapting it for microscopic work carried on by a large class. In a similar section of the building, east of the central hall, with similar front arrangements to insure light for microscopic work, are located two smaller laboratories to be employed in the teaching of surgical pathology, neuropathology and clinical pathological technology; and private rooms for the instructors of these branches are arranged to open upon these larger laboratories.

The architecture is distinctly "Pennsylvanian" and conforms to that of the dormitory system, the new law school building, gymnasium, engineering hall, and the stadium of the University. It forms at present one of the most imposing sights in Philadelphia.

MISCELLANEOUS NOTES.

Blood Impoverishment.—In meeting that condition of the system embraced in the above headline, is it not true that our first thought, and that to which our instinct naturally leads us, is iron: but viewed from the standpoint of now accepted scientific facts, is this not looking at but one phase of the question? That there is a deficiency of iron in the blood in most forms of anemia is, of course, indisputable; and to endeavor to supply this lack by the administration of iron seems but a common sense procedure. This practice would be sufficient if anemia were, in reality, nothing more than a condition of iron deficiency; but modern physicians know that the real underlying causative factor is a disturbance of the complicated processes of nutrition and metabolism, and that iron poverty is but one manifestation of this disorder. Sufficient proof of this fact has been presented to every physician when he has observed how anemic conditions persist in spite of the long continued administration of iron. Here, then, iron must be supplemented by such remedies as have the ability to awaken the depressed nutritive and metabolic processes. To invigorate, to rekindle nervous force, to revitalize all functions, and thereby bring about a condition of systemic vigor, of which blood-enrichment is necessarily a feature, the addition of Manganese with Iron is desirable. In Pepto-Mangan, Iron and Manganese was first brought to the attention of the profession by Dr. Gude, chemist, and this preparation is found to be one of the best therapeutic resources of the present-day physician, and when combined with such other remedies as meet the indication, such as we have spoken of, forms at once a therapeutic arsenal whose fortress is impregnable.—Editorial in *Medical Summary*, March, 1904.

Sanmetto in Genito-Urinary Diseases.—I have prescribed Sanmetto with much satisfaction in diseases of the genito-urinary organs, with marked effect in prostatic troubles of old men, and in different kinds of urethral inflammation, even in gonorrhea. It is certainly an excellent vitalizing tonic to the reproductive system. I am using original packages, except very rarely in smaller quantity, and then I am absolutely sure that no substitution is practiced, as I see to it with my own eyes, if necessary, that the genuine article is gotten by my patients. The subject of substitution, so largely practiced, is one of pre-eminent importance, and needs to be watched by all physicians, with both eyes.

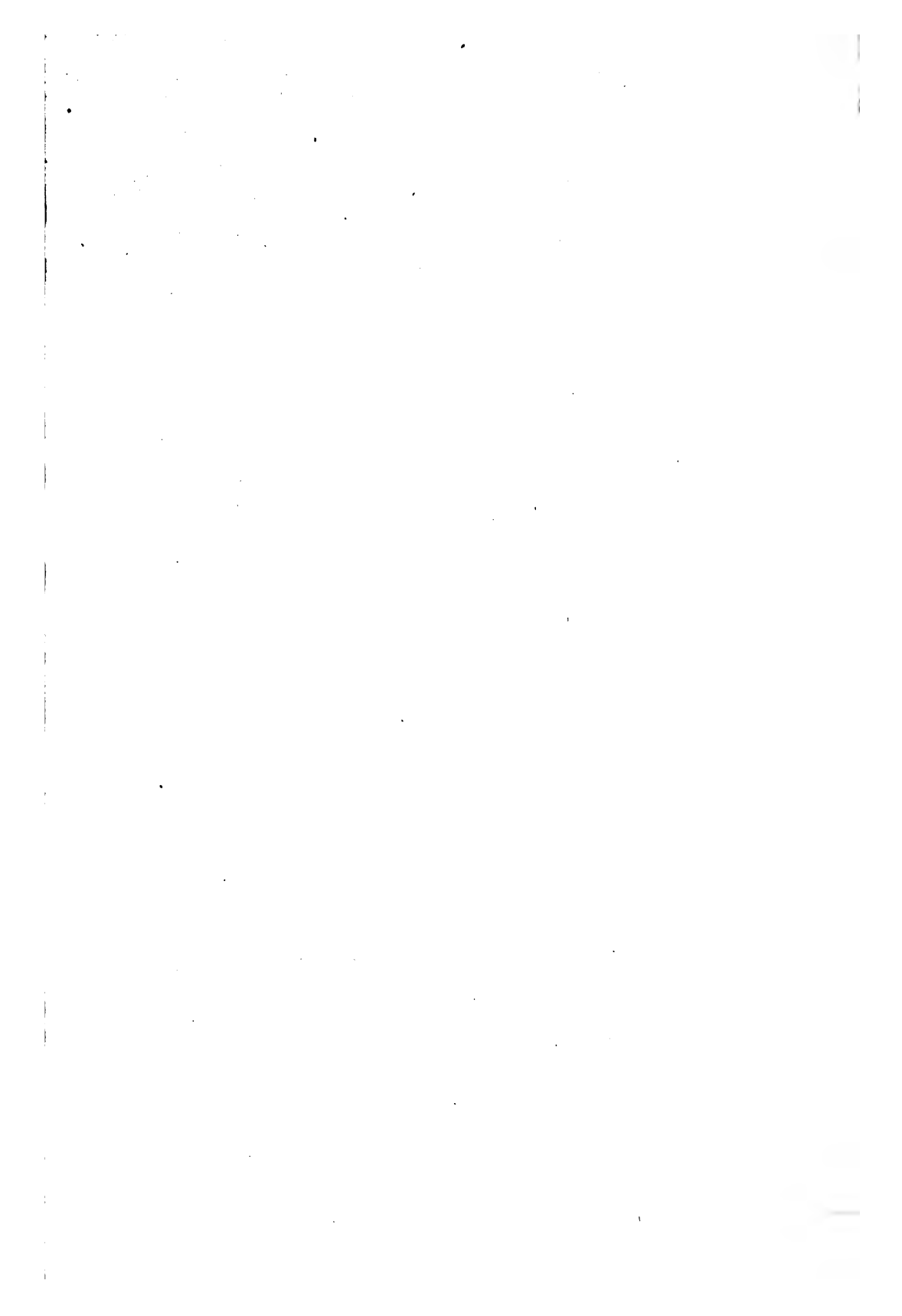
Russell, Kans.

JOSEPH W. ROBB, M.D.

The Pain in Rheumatic Gout.—Chas. P. Heil M.D., late Professor of Anatomy, Indiana College of Medicine, Indianapolis, Ind., in the *Mobile Medical and Surgical Journal*, states: "Many of the cases of rheumatic gout which I have treated were of an obstinate and complicated character, and I must state that I myself have been suffering with an attack in the nature of a very severe inflammatory condition, situated in and over the articulations of my wrist, knee and ankle joints. The pain which I suffered most of the time was indescribable. I placed myself under the care of a physician, who, upon examination, pronounced me also slightly affected with cardiac trouble. I suffered the most excruciating pain for ten days and nights, without alleviation of my sufferings, nor apparent signs of progress for the better. Knowing full well the efficiency and value of Antikamnia Tablets in these cases, I took two tablets, and about ten minutes after taking them the pain was relieved, I perspired slightly and then fell into a gentle sleep. The result was simply magical. I slept eight hours in perfect rest, free from all pain. I continued the two tablets every four hours during my convalescence and until complete recovery."

Superior to the Opiates.—Nervousness, from whatever cause it may arise, is easily controlled with Daniel's Concentrated Tincture Passiflora Incarnata. Passiflora is distilled from the May-pop, which contains, of all fruits, the highest property of inducing natural sleep. Its advantage over the opiates is that it strengthens and up-builds, instead of wasting and tearing-down. This is the most estimable quality in a sedative, and one for which the practitioner has a daily need. In all nerve diseases its advantage is readily appreciated, because the patient must not only have sound slumber, but should awake refreshed, and without the desire for another dose of medicine to revive from the after-effects of that already taken. This office is performed by Daniel's Passiflora, because it leaves the nerves relaxed, and in a healthful condition.

Kennedy's Dark Pinus Canadensis as a Mucus Astringent.—When an internal mucus astringent is indicated, in such cases as cholera infantum, etc., Kennedy's Dark Pinus Canadensis should be given in an alkaline medium.



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